

AD-A208 043

**EMERGING SOVIET DOCTRINE:  
IMPLICATIONS FOR THE U.S.  
TASK FORCE DEFENSE**

**A Monograph  
by**

**Major Michael D. Burke  
Infantry**



**DTIC  
ELECTE  
MAY 17 1989  
S E D**

**School of Advanced Military Studies  
United States Army Command and General Staff College  
Fort Leavenworth, Kansas**

**First Term AY 88-89**

**Approved for Public Release; Distribution is Unlimited**

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
1a. REPORT SECURITY CLASSIFICATION			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY UNCLASSIFIED			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION Fort Leavenworth, Kansas 66027		6b. OFFICE SYMBOL (If applicable) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code)			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
					WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Emerging Soviet Doctrine: Implications for the U.S. Task Force Defense					
12. PERSONAL AUTHOR(S) MAJ Michael D. Burke, USA					
13a. TYPE OF REPORT monograph		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 89/1/10	
				15. PAGE COUNT 60	
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	tactical defense, Soviet doctrine, U.S. doctrine, combined arms (U)		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This monograph discusses selected aspects of Soviet offensive doctrine with emphasis on trends discussed in unclassified literature. Relevant U.S. heavy task force doctrine is then reviewed in light of what the Soviets are doing and the implications for defense are highlighted. Subjects addressed in this paper include Soviet use of surprise, tempo, mobile groups, fire support and helicopters, and sophisticated combined arms tactics to deal with U.S. defenses. Soviet concerns over "nuclear-like" weapons are discussed along with relative views of a future high intensity battlefield. Possible areas of concern for U.S. doctrine developers are identified and discussed along with some ideas for adapting our training					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ Michael D. Burke			22b. TELEPHONE (Include Area Code) (913) 684-2138		22c. OFFICE SYMBOL ATZL-SWV

BLOCK 19 (CONT)

to reflect current Soviet doctrine.

The paper concludes that tactical surprise is likely to be achieved by the Soviets, and that training and doctrine should reflect this situation. The paper also questions the validity of the assertion that a task force can defeat a regiment, not because of deficiencies in U.S. doctrine or equipment, but as a function of high intensity mobile warfare. In addition, the monograph suggests changing the composition of the OPFOR at the NTC from a rifle regiment to a tank regiment, in order to more closely model emerging Soviet doctrine.

Emerging Soviet Doctrine:  
Implications for the U.S. Task Force Defense

by

Michael D. Burke  
Major, Infantry

School of Advanced Military Studies  
U.S. Army Command and General Staff College  
Fort Leavenworth, Kansas

10 January 1989

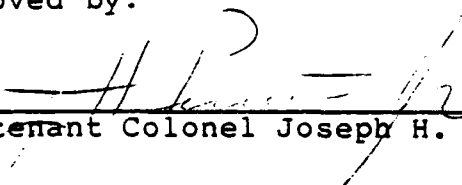
Approved for public release; distribution is unlimited

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

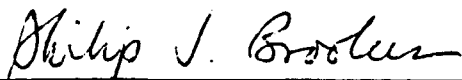
School of Advanced Military Studies  
Monograph Approval

Name of Student: Major Michael D. Burke  
Title of Monograph Emerging Soviet Doctrine and Its Implications  
for TF Defense.

Approved by:

  
\_\_\_\_\_  
Lieutenant Colonel Joseph H. Purvis, M.P.A. Monograph Director

  
\_\_\_\_\_  
Colonel L. D. Holder, MA Director, School of  
Advanced Military  
Studies

  
\_\_\_\_\_  
Philip J. Brookes, Ph.D. Director, Graduate  
Degree Programs

Accepted this 16th day of December 1988.

## ABSTRACT

EMERGING SOVIET DOCTRINE: IMPLICATIONS FOR THE U.S. TASK FORCE DEFENSE, by Major Michael D. Burke, U.S. Army.  
43 pages

This monograph discusses selected aspects of Soviet offensive doctrine with emphasis on trends discussed in unclassified literature. Relevant U.S. heavy task force doctrine is then reviewed in light of what the Soviets are doing and the implications for defense are highlighted.

Subjects addressed in this paper include Soviet use of surprise, tempo, mobile groups, fire support and helicopters, and sophisticated combined arms tactics to deal with U.S. defenses. Soviet concerns over "nuclear-like" weapons are discussed along with relative views of a future high intensity battlefield. Possible areas of concern for U.S. doctrine developers are identified and discussed along with some ideas for adapting our training to reflect current Soviet doctrine.

The paper concludes that tactical surprise is likely to be achieved by the Soviets, and that training and doctrine should reflect this situation. The paper also questions the validity of the assertion that a task force can defeat a regiment, not because of deficiencies in U.S. doctrine or equipment, but as a function of high intensity mobile warfare. In addition, the monograph suggests changing the composition of the OPFOR at the NTC from a rifle regiment to a tank regiment, in order to more closely model emerging Soviet doctrine.

## Table of Contents

I.	Introduction.....	1
II.	Emerging Soviet Doctrine.....	4
	Surprise.....	5
	Tempo.....	6
	Fire Support.....	7
	Forward Detachments and Deep Battle....	10
	Combined Arms in the Close Battle.....	12
	Command and Control.....	14
	Nuclear Posture and New Weapons.....	15
III.	U.S. Task Force Defense.....	17
	Deep Operations.....	19
	Main Battle and Reserve Operations.....	19
	Security Operations.....	22
	Command and Control.....	23
IV.	Analysis.....	24
	Surprise and Tempo.....	26
	Combined Arms, Mobile Groups, and Deep Battle.....	27
	Fire Support.....	32
	Security Operations.....	34
	Command and Control.....	36
V.	Conclusions.....	37
	Diagrams:	
	1. Artillery Support.....	41
	2. 1942 Soviet Tank Corps.....	42
	3. Soviet "shock subunits", 1945.....	43
	4. Task organized Soviet battalion....	44
	5. U.S. Task force.....	45
	6. Army forward detachment.....	46
	7. Division forward detachment.....	47
	8. Soviet division main attack.....	48
	9. Soviet division supporting attack..	49
	Appendix:	
	Soviet vs. American imperatives.....	50
	Endnotes.....	51
	Bibliography.....	55

## PART I: INTRODUCTION

Regardless of the circumstances leading to war between the Soviet Union and the United States, the outcome of the conflict will depend on the success of the Warsaw Pact's offensive. By the nature of the alliance, the initiative will be ceded to Warsaw Pact forces, and NATO will await the blow. The success of the defense at every level will determine when, if ever, friendly forces go over to the counter-offensive. The stationing of 214,019 out of 768,211 active Army troops underscores American determination to meet any Soviet offensive head on.<sup>1</sup>

Recognition of the importance of the NATO mission and the enormity of the challenge facing the U.S. Army was given prominence by the 1976 edition of FM 100-5.

Operations. That manual focused the Army's attention on the results of the 1973 Yom Kippur war and the threat posed by the forces of the Soviet Union. With the adoption of "active defense", Army doctrine gave primacy to the "central battle" in Europe and concentrated on the possibility of war with the Russians.

Since 1976, the swift growth of Soviet power and the increasing pace of technological change have spurred new visions of the next battlefield which both Soviet and American military authors have called "Air-Land" in nature. In the American Army, the product of this new wave of thought was the 1983 version of FM 100-5, which introduced "AirLand Battle". Concurrently, Soviet planners and theorists began seriously evaluating the likelihood of non-



nuclear conflict in Europe, in light of nuclear parity.<sup>2</sup>

The threat posed by the military forces of the Soviet Union caused U.S. doctrine to address Soviet capabilities at every level. A capstone series of field manuals on the Soviet Army ( FM 100-2-1, 2, and 3 ) was published in 1984. Every Army branch school has instruction on the way the Soviet army fights. Conflict scenarios involving the two superpowers are discussed and exercised routinely. This focus also led to the establishment of the National Training Center (NTC) at Fort Irwin, California.

In the Mojave desert the U.S. Army constructed perhaps the most realistic combat training facility ever built. This facility is an instrumented training area which permits American task forces and brigades to engage an Opposing Force (OPFOR) which uses Soviet doctrine and equipment modified to resemble Russian material. A similar, but smaller facility is currently being established in Europe to allow forward deployed units the same training opportunity.

Are all of these attempts to replicate combat against Soviet forces on the next battlefield adequate? Do we understand Soviet tactical doctrine in light of Soviet responses to the dynamics of warfare? The question is critical in view of the weight accorded to lessons learned by training units at the NTC and in combat simulations used throughout the Army. If real Soviet forces fell to us in ways we have come to expect, then we may find ourselves in very serious trouble at the outset of conflict.

This paper will examine one element of the question by focusing on a basic component of the next battlefield: Soviet attack and U.S. task force defense. The space available in a limited monograph will not permit a truly exhaustive study of even a fairly narrow subject field. For that reason I've further limited my examination to a sampling of tactical concepts which have an impact on the conduct of defensive engagements at the task force level.

Implications for U.S. Task Force level defense raised by developing Soviet doctrine will be examined, with emphasis on examining certain aspects of the Soviet attack, and how the defensive framework is affected. There are four reasons for doing this. First, it has been my experience that tactical Soviet doctrine is well understood as long as it fits inside the "doctrinal template", but not well known when it involves forward detachments which operate outside the template. Second, the task force level is a good place to illustrate that Soviet doctrine is dynamic and responsive to changing battlefield conditions. Third, I think it's important to dispel some of the template mentality with which we view the Soviets. Finally, I believe there are some conceptual difficulties in current U.S. task force doctrine which need to be addressed.

In structuring this monograph, I've presumed a working knowledge of American task force defensive doctrine and at least a passing familiarity with standard Soviet regimental and divisional attack doctrine. The emphasis here will be more on emerging Soviet concepts and the implications for

future U.S. doctrine. Only unclassified documents and articles were used in preparation of this monograph. This had the important effect of limiting my speculation on the impact of still classified developments, and also circumscribed any reference to actual Soviet exercises other than what is available in open literature.

## PART II: EMERGING SOVIET DOCTRINE

The Soviet Army may be characterized as an operationally based force. Russians emphasize the nature of combat involving *armies, fronts, and Theaters of Military Operations* (TVD). In order to understand the Soviet's tactical offensive doctrine and force structure, it is necessary to examine the operational framework within which it is embedded.

The Soviets pride themselves on being the first nation to recognize the changing nature of war and the first to adjust their military art to those changes... Thus, to its credit, Soviet military theoretical thought, having first succeeded in seeing these tendencies in the development of military affairs, correctly perceived and revealed the new component of military art, operation [sic] art.<sup>3</sup>

The operational nature of the Soviet Army is embodied in the eight (Soviet) principles governing modern warfare: 1) Flexibility and high tempo of combat operations, 2) Concentration of effort, 3) Surprise, 4) Combat activeness, 5) Preservation of combat effectiveness, 6) Realism, 7) Coordination, 8) Action through the enemy's depth.<sup>4</sup> These principles also guide the evolution of Soviet force design and doctrine.

The Soviets perceive that the nature of future

operations will be characterized by "decisiveness, high maneuverability, intensity, fast and sharp changes, and diversity of methods in combined arms."<sup>5</sup> The Soviets see the next battlefield as non-linear, fluid, and characterized by high intensity fires. They characterize "air-land" battle as blending "combined arms battle" and "three dimensional combat operations" into one concept.<sup>6</sup>

The Soviets recognize the difficulties of conducting an operational offensive.<sup>7</sup> They acknowledge the formidable capabilities of a prepared American defense and would seek to obviate it in five ways; 1) Surprise, 2) Tempo, 3) The use of firepower to adjust force ratios, 4) The use of forward detachments, maneuver groups, and vertical envelopments to disrupt the continuity of the defense, and 5) Carefully structured combined arms units to carry out the attacks.

### SURPRISE

The most critical element in Soviet calculations will be the achievement of surprise, precipitating an offensive against an unprepared or partially prepared NATO defense. As Soviet experience in the battles on the Eastern Front demonstrated, surprise alters the correlation of forces in favor of the attacker, and is the cornerstone of operational success. The British Army states that the Soviets will not attack NATO unless surprise is guaranteed, and that if attack plans were detected early, the entire offensive would be postponed.<sup>8</sup>

It follows that there are three possible operational scenarios to consider. First, the Soviets do not achieve surprise, but go ahead and attack a fully prepared defense anyway. Second, the Soviets achieve partial surprise, attack a partially prepared defense. Third, NATO is caught completely unaware, total surprise is achieved, and there are no defenses at all. The first case is unlikely given the premium Soviets put on surprise. The latter scenario, while nightmarish, is unlikely given the considerable effort NATO makes to avoid being caught asleep. This leaves the middle case, a Soviet offensive against a partially completed defense, as a logical point of departure for examining potential Soviet actions. The Soviet perception of what degree of surprise has been achieved will determine the tactical decision.

#### TEMPO

"The Soviet Army," it has been said, "fights to move, whereas Western armies move to fight."<sup>9</sup> Soviet commanders internalize tempo in terms of depth, simultaneous action against the enemy, and speed of operations. While virtually every current Western publication on Soviet doctrine describes operations as "fast paced" and gives excellent examples of depths of objectives, few address the "why". The compression of time in terms of the separation of battlefield events promotes paralysis within the command and control system. We in the U.S. Army have coined the expression "turning inside the enemy's decision cycle" to describe the desired outcome.

Today, the Soviets are seeking to increase the "simultaneity" of combat at every level and in great depths. The late British military author Richard Simpkin discussed this in his book Race to the Swift. His ideas translate to a vision of "simultaneous" combat over a great depth which contributes to paralysis of the control mechanism of a force.<sup>10</sup> This theme is echoed in Polish military writings, where helicopter and fire strikes are seen as a means of "splitting the enemy from within" as opposed to battering through the enemy from without.<sup>11</sup> Assuming that the Polish officers are writing with some knowledge of Soviet thought, it is logical to conclude that the Soviets are striving to increase the "tempo" of tactical combat by making deep, main, and rear battle occur together. This is in consonance with the concept of nuclear scared operations, forward detachments, heliborne assaults, and unconventional warfare. Going a step further, if the Soviets see simultaneous offensive combat as a real possibility, then they are going to be prepared to engage in such battles, but on their own terms.

#### FIRE SUPPORT

As there would be only one main attack at *front*, army, and division, Soviet fire support for the main effort would be lavish. A Soviet regiment making the main attack could expect to receive the supporting fires of at least four to six battalions of division controlled artillery in addition to the artillery of the regiment. If the attack were

operationally important , fires from Army-level artillery would be added. Figure 1 on page 44 gives some possible planning figures. In addition, forward detachments and mobile groups will receive powerful fire support from attack helicopters of the divisional squadron and army level helicopter regiments.<sup>12</sup> The emphasis on aerial fire support is one of the most distinctive features of emerging Soviet doctrine. Helicopters answer many of the problems the Soviets foresee in maintaining a high tempo in the attack.

In contrast to U.S. doctrine, attack helicopters are considered fire support assets, providing both close and anti-tank fires. They are the modern version of the Il-2 *Stormovik*, the "flying tank" of WWII fame. On the battlefield helicopters would provide close air support, particularly to mobile groups. Helicopters will be given the mission of protecting advancing troops from U.S. counterattacks.<sup>13</sup>

In a recently published article, Major J. F. Holcomb of the U.S. Army, working with the Soviet Studies Center at Sandhurst, pointed out the critical importance the Soviets place in helicopters as mobile fire support. These assets rapidly alter the correlation of forces through pinpoint destruction of enemy tank, artillery, and anti-tank means. Their usefulness is even greater in support of forward detachments and mobile groups. They provide security for fast moving forward forces; rapidly counterattacking ground threats and if required, other helicopters.<sup>14</sup> The apportionment of combat helicopters would be in consonance

with the importance of the mission; the army forward detachment and divisional forward detachment of the main effort division would be heavily supported by organic and Army level assets; supporting attacks would receive fewer sorties.

The importance of fire support to the attack cannot be overestimated. Taktika indicates that the density of NATO anti-tank systems could reach 50 or more weapons per kilometer in a main defensive sector. However, the majority of these weapons will be concentrated in "groupings of fire weapons" within 1.5 kilometers of the front. Direct and indirect fires must achieve greater than 50% suppression to ensure the success of the attack.<sup>15</sup>

Fire support is used to change the initial correlation of forces. For example, Soviet planners consider a five to one ratio of tanks to anti-tank systems per kilometer of front as providing a 92% probability of success for the attack.<sup>16</sup> If we assume that there are 290 tanks and approximately 600 additional heavy and medium anti-tank systems (less helicopters) in a U.S. mechanized division sector of 40 kilometers width, it follows that the average anti-tank (AT) weapons density is approximately 22 weapons per kilometer. This would require a density of over 100 tanks per kilometer of attack frontage. But if supporting artillery neutralizes 50% of the AT weapons, then the requirement for tanks drops to 50 tanks per kilometer of front. In this case, a motor rifle division with 270 tanks



could expect success if the attack frontage were less than 6 kilometers, which is approaching the "doctrinal" norms for such an attack.

#### FORWARD DETACHMENTS AND DEEP BATTLE

The principle, "action through the enemy's depth" provides the foundation for the Soviet concept of deep battle. Deep battle is a comprehensive concept involving combined arms and joint operations. The centerpiece of combined arms deep battle appears to be the "mobile group". Mobile groups, (or maneuver groups) may be designated at division, army, or *front*. In general, the Soviets use mobile groups as spearheads for larger formations. Their missions are inextricably tied to the Soviet theory of deep battle which demands simultaneous combat through the depth of the enemies formation. The Soviet concept of mobile groups striking to the enemy's depth ahead of larger formations is receiving great emphasis because of the need to destroy "reconnaissance strike complexes" and nuclear delivery means.<sup>17</sup>

Soviet study into the phenomenon of past wars and present conditions reinforced Soviet theoretical concepts concerning the nature of deep battle. The genesis of combined arms deep battle can be found in the hard lessons of the Eastern front. Early attempts using pure tank striking forces matured into all-arms formations capable of penetrating the tactical depths of the enemy defense and exploiting to operational depth. "Mobile Groups" were formed to spearhead offensives at both the tactical and

operational level. In the Manchurian offensive of August 1945, the Red Army demonstrated that it had mastered the employment of maneuver groups when it engulfed all of Manchuria in an offensive lasting ten days. (Figure 2 on page 45 illustrates the makeup of a WWII tank corps, the type of unit frequently charged with conducting deep operations.)

A variety of evidence indicates that Soviet planners consider operations conducted at Manchurian tempos fundamental to achieving strategic objectives with the minimum possible risk of nuclear holocaust.<sup>18</sup> Soviet experience on the Eastern Front and in Manchuria convinced them that the use of very mobile spearheads at tactical and operational level contributed decisively to the rapid destruction of the enemy. "Deep battle concepts have accordingly evolved from narrow strikes deep into the enemy's rear to broad front encirclement on *Front* and multi-*Front* levels, using army sized mobile groups, air assaults, and airborne landings."<sup>19</sup>

Helicopters are the primary means by which air assault forces are inserted behind the covering force area, perhaps in conjunction with the actions of forward detachments. Soviet theorists believe that the combination of forward detachments, air assaults, and combat helicopter fire support is the "most rapid and effective means for penetrating the enemy's tactical defense quickly, thereby allowing the higher commander to exploit into the enemy's

operational depths".<sup>20</sup>

Soviet force structure appears to be evolving to meet the demands of deep battle by providing mobile groups at every level:

Current sophisticated Soviet maneuver concepts, involving concerted use of multiple tactical and operational maneuver groups, exploits the fact that quantity has a quality of its own. Multiple maneuver groups operate in tandem, employing techniques specifically designed to preempt, unhinge, and paralyze a defense. Their sheer number contributes to the likelihood of their success.

Extensive Soviet study of past operational and tactical maneuver indicates that they must continue to pay close attention to the structure of operational and tactical maneuver.<sup>21</sup>

The Soviet Army Studies Office (SASO) sees a return by the Soviets to the flexible, tailored, corps and brigade structure which characterized the mobile groups of the Second World War:

Within combined arms armies, tank or mechanized corps will conduct operational maneuver and employ its own tactical maneuver force in the process. Separate tank corps or brigades will serve as army forward detachments. Motorized rifle divisions will employ separate tank or motorized rifle brigades as their forward detachment.<sup>22</sup>

#### COMBINED ARMS IN THE CLOSE BATTLE

The Soviets are reexamining the balance of all arms necessary to conduct high tempo warfare against a well armed adversary. The recent republication of General Rotmistrov's 1946 speech on Berlin operations is indicative of Soviet concern with the nature of combat in Western Europe, especially in light of urbanization and reforestation. In his speech, General Rotmistrov analyzed the problems that hampered the Soviets when they captured Berlin. General

Rotmistrov stressed the completely different nature of combat, particularly in "anti-tank" terms. What worked in Poland did not work in Berlin. He stated that combined arms balance and tailoring down to the subunit level were critical to the tempo of the attack. The former commander of 5th Guards Tank Army spoke of "shock subunits" and the importance of infantry in prosecuting round-the-clock fighting. (Figure 3 on page 46 depicts shock units of the WWII variety.) He also emphasized the flexibility inherent in the mechanized corps structure to facilitate offensive operations in forested and urbanized terrain.<sup>23</sup> Whether this presages eventual reorganization of Soviet battalions into combined arms formations is not yet clear, although there is a strong possibility this is occurring.<sup>24</sup> Soviet battalions are normally heavily reinforced when in the first echelon or operating independently. But the arguments concerning force structures necessary to maintain offensive momentum in close terrain would appear to be as valid today as in 1946. There appears to be a growing realization that while battle might be centrally planned, its execution will be decentralized:

The increase in the spatial scope of combat demands creativity, decisiveness, and independence on the battlefield. The Motor Rifle (Tank) Battalion is the basic combined arms subunit and the basis for organizing coordination of subunits of the branches of troops... The changes which have taken place in weapons and in equipping the Battalion with various armament and equipment have also affected the nature of combat of small subunits; The conditions of conducting combat have changed: its organization has become more complex; The depth of combat tasks has increased; and the rate of advance in an offensive has increased... A commander who operates according to a preset plan without taking into account changes which have occurred, as a rule, will suffer failure in combat; for command and control in this case will lag behind the

development of the actual situation.<sup>25</sup>

Greater flexibility is necessary at the company and even platoon level because these units must be prepared to operate in "separate sectors, sometimes far away from the main forces...Mistakes and stereotypical tactics can neutralize the effects of many people."<sup>26</sup> Increasing emphasis is being placed by Soviet writers on the necessity for fluid operations by "subunits" at every level. This emphasis on flexible operations manifests itself in both organization and tactics. Figure 4 on page 47 provides a detailed picture of how a lead Soviet battalion might be organized for combat.

#### COMMAND AND CONTROL

The complexity of the next battlefield challenges the Soviets confidence in their troop control methods. A Soviet battalion conducting an attack may receive one of the following missions: first or second echelon of the attack force, combined arms reserve, advance guard, covering force, flanking force, reconnaissance in force, or tactical airborne landing force.<sup>27</sup> Given the large number of attachments and the extremely small size of the battalion staff, the problem of controlling and coordination the effort of even a small "subunit" becomes monumental. Drills are used wherever possible to simplify the process of command and control.

Automation of command and control processes at every possible level is seen as a "must". The integration of

automated command and control processes is entirely consistent with the dialectic process of military development, and the Russians feel that man and technology are naturally compatible. They see the combination of careful tailoring of forces to expected missions, the integration of new equipment according to the operational needs of the forces, and the automation of command control and communications as providing the key to the future.<sup>26</sup>

### NUCLEAR POSTURE AND NEW WEAPONS

One of the salient characteristics of all Soviet operations is their "nuclear scared" posture, and the continuous planning for immediate transition to nuclear supported operations. Emerging Soviet doctrine does not consider the resort to nuclear weapons as inevitable.<sup>27</sup> However, the Soviets believe that the presence of nuclear weapons mandates the continuous performance of missions in a "nuclear scared" posture. All operations are planned with the nuclear threat in mind, and forces are only massed in close proximity of the enemy. It is this "nuclear scared" doctrine which drives the Soviets to seek high tempo, decisive operations involving the rapid intermixing of Soviet and NATO forces in fluid battles.<sup>28</sup>

The Soviets are concerned that developing technology has created "nuclear-like" effects on the battlefield using conventional means. The development of smart munitions, fuel air explosives, scatterable mines, and automated target detection and attack systems are producing a "revolution" on the battlefield, according to many Soviet writers.<sup>29</sup> "These

new weapons", according to former Chief of the General Staff Marshal Akhromeyev, "will come close to nuclear weapons in power range and accuracy"<sup>32</sup>

This concern is manifested in the emphasis being placed on the attack from the march by Soviet writers:

Today the transition to the offensive from the line of march may be effected not only in the course of development of battle in enemy defenses at tactical or operational depth, but also at the very beginning of the operation, including during penetration of prepared well fortified defenses, since attacking troops can annihilate or dependably neutralize defenses by means of nuclear or fire weapons...Then swiftly break through in depth.<sup>33</sup>

No area of developing technology concerns the Soviet Army more than the fielding of "smart" weapons in quantity by the West. Polish military writings emphasize this point. In an article entitled "Anticipated Directions for change in Tactics of Ground Troops", Colonel S. Koziej points out that nuclear weapons are growing in number and decreasing in size, while conventional weapons are swiftly approaching the destructiveness of nuclear weapons, thus "blurring the distinction" between the two. The capabilities of modern weapons, he argues, force a "complete re-evaluation of the very essence of the defense on a future battlefield." Such weapons invert the Clausewitzian idea of awaiting the blow. Both sides have at their disposal nuclear and non-nuclear strike weapons, which can cause "abrupt changes in the correlations of forces."<sup>34</sup> The defender may not cede the initiative to the attacker, but may attempt the counterstroke immediately. The result may be complete

chaos, with both sides engaging in offensive combat simultaneously.

The Russians are concerned about their own abilities to field very destructive conventional weapons, but are nonetheless prepared to exploit the effects of these weapons in the same manner as they would exploit nuclear strikes. However, they are gravely concerned that these developing technologies may herald a fundamental change in warfare, a change which might make the historical foundation of the Soviet Army irrelevant.

### PART III: U.S. TASK FORCE DEFENSE

American doctrine developers view any European battlefield as non-linear in nature, extraordinarily lethal, and complex. FM 100-5 states:

In high or mid-intensity conflicts, Army forces must be prepared to fight campaigns of considerable movement. Even in conventional combat, operations will rarely maintain a linear character.<sup>35</sup>

Colonel Huba Wass de Czege, one of the principal authors of FM 100-5, goes further and says: "The battle, especially in the area where the battle outcome is decided, is likely to be intense, quick and deadly. So much so that it will be difficult to determine what is going on."<sup>36</sup> The task force role is critical to the close battle. It is the primary executor of the close battle. FM 100-5 goes on to say that it is the close battle which is decisive.<sup>37</sup>

The armored striking arm which conducts the battle is the combined arms task force. The task force begins as either a tank or mechanized infantry battalion. Normally,



the brigade commander cross attaches tank and infantry companies to form the task force. Additional assets are provided from divisional units according to the situation. Task forces are usually defined as "tank heavy", "mech heavy" or "balanced". Battalions which have not been task organized by the Brigade are called "pure". Normally, the task force will end up with some mix of between three to five companies. Mechanized infantry battalions have an additional anti-tank company equipped with the Improved Tow Vehicle (ITV). For comparison purposes, a mechanized infantry task force comprising two tank companies, two mechanized companies, and one anti-tank company will be used as a base. (See figure 5 on page 48)

The modern American task force is, as the Soviets recognize, the best equipped battalion level organization in NATO. Using the balanced task force above as an example, we find 6 infantry platoons, 28 main battle tanks, 34 cannon/missile armed fighting vehicles, twelve anti-tank missile vehicles, and six 107 millimeter mortars available to the commander. Each of the tanks is, if one considers weight and advanced armor, the best protected armored fighting vehicle in the world, and the infantry fighting vehicle's protection rivals that of early WWII tanks.

Task force defensive doctrine describes the basic types of defensive missions as defense of a sector, defense of a battle position, and defense of a strongpoint. Of these, defense of a sector is the most common and preferred for its

flexibility. Regardless of the type of defense, the conduct of the defense is based on a framework consisting of five elements; deep operations, the main battle area, reserve operations, security area, and rear battle operations.<sup>30</sup> In this section, I'll discuss the first four as well as command and control. Rear operations will be touched on briefly in the next section.

### DEEP OPERATIONS

American planners are placing increasingly greater emphasis on deep battle to disrupt and delay, and in the future, destroy Soviet forces before they can engage in close battle. The success of the close battle depends on the success of the deep battle in disrupting the Soviet higher tactical and operational level offensive. It was this supposition of the nature of Soviet offensive operations which led to the publication of "AirLand" doctrine in 1982.<sup>31</sup> This is a subject beyond the scope of this paper, but it would be remiss not to consider that the function of "deep operations", particularly at corps and above, is to isolate the defensive battle and allow task forces to win their fights before being overwhelmed by fresh forces.

The task force does not conduct its own deep battle. The task force commander considers the effect of higher deep operations on his own area, but has no capability to execute the deep battle. Task forces may, however, be an active player in a larger deep operation, but will be executing close combat operations as part of that plan.

## MAIN BATTLE AND RESERVE OPERATIONS

A U.S. task force can successfully defend against a Soviet Regiment. FM 71-2 states: "During the defense, the battalion task force is expected to defend against and defeat a threat regiment".<sup>40</sup> Current U.S. doctrine states that the brigade should be capable, within the framework of AirLand Battle, of defending successfully against a Soviet division. This same hierarchy is carried up to Corps level where FM 100-15 states that the Corps defends against and defeats two or three Soviet Armies comprising a *Front*.<sup>41</sup> This is consistent with current American thought on the strength of a prepared defense, which confers a minimum 3:1 advantage.<sup>42</sup> At the National Training Center, a battalion task force normally defends against a regiment.

Current task force doctrine does not specify the average width or depth of a task force sector or size of a battle position. It is safe to presume that if doctrine (in this case FM 71-2) shows a threat regiment attacking on a 3-8 kilometer wide frontage, that would also be the width of sector for a task force in the defense. In practice, task force defensive frontages may be greater than 8 kilometers, chiefly as a function of the number of battalions available to the brigade commander and the sector for which he is responsible. Sector defenses at the National Training Center, for example, may be greater than 10-12 kilometers in width.

The concept of depth is critical to AirLand doctrine.

FM 71-2 states:

Task force commanders structure their defenses by deploying units in depth within the MBA. A mounted reserve of one-quarter to one-half of the task force strength provides additional depth and gives the commander a maneuver capability against the enemy. A commander can create a reserve by taking risk on less likely enemy avenues of approach in the MBA.<sup>43</sup>

This is a distinct change from the "active defense" doctrine of the late 1970's, where a "subtracted" reserve was viewed as exceptional. FM 71-2 goes on to say that the task force will normally maintain a company sized reserve as a counterattack force.<sup>44</sup> Tank heavy reserves are seen as the ideal means of seizing the initiative and going over to the offense.

Weighting of defensive effort in the task force defensive is achieved by a number of methods including:

- 1) Assigning more maneuver units, 2) Narrowing the defensive sector, and 3) Providing greater amounts of combat support--especially fire support. A particularly critical defensive sector may be bolstered by a combination of all three, but massing of supporting fires and priority of engineer support are the most common means for weighting the defense.

Normally, brigade or division reserves are expected to counterattack, and therefore are positioned in depth in order to conduct flank attacks.

Re-examination of the trade offs between survivability and countermobility resulted in growing emphasis on survivability over countermobility. Where previous doctrine automatically accorded countermobility priority in defensive

operations. in the 1968 edition of FM 71-2 survivability has been moved to top priority, at least at the battalion level.<sup>45</sup> In terms of the resources normally available to the battalion task force, the best immediate use of engineering assets lies in protecting the critical systems of the task force. The growing availability of artillery delivered mines lessens the requirement to prepare extensive minefields.

American divisions have some 50 attack helicopters organic to the aviation brigade, and the fielding of the AH-64 family of armed helicopters at the Corps level gives American forces an all weather platform capable of delivering large numbers of precision guided munitions (PGMs). Attack helicopters are considered maneuver elements and normally enter the battle at the direction of corps and divisions, but units down to task force level are generally familiar with the employment of attack helicopters and routinely employ them at the National Training Center. However, the release of such formidable assets to the task force will be exceptional, according to General Saint, USAREUR commander.<sup>46</sup> A task force may well end up operating in conjunction with attack helicopter battalions as part of a brigade or division counterattack.

#### SECURITY OPERATIONS

FM 71-2 states "The winner of the reconnaissance-counter reconnaissance fight is normally the victor in the battle."<sup>47</sup> This is an outgrowth of analysis of NTC defensive engagements and reflects the growing concern at

every level with the success of the enemy's reconnaissance. The Center for Army Lessons Learned (CALL) at Fort Leavenworth quantified the results of the reconnaissance-counter reconnaissance struggle at the NTC and determined that about 75% of the time, the side which defeated the enemy's reconnaissance effort won the engagement.<sup>48</sup>

The emphasis on the forward security fight has led to considerable experimentation, all designed to defeat Soviet ground reconnaissance. The commander may elect to deploy a company or company team in the security area, in effect establishing a small covering force behind the brigade or division covering force. In other schemes, ad hoc forces comprising scout platoons, tanks, infantry, and anti-tank assets are formed within task force to fight the forward battle. Often, such forces are grouped under temporary headquarters in order to leave the regular maneuver companies free to conduct the maneuver battle.

#### COMMAND AND CONTROL

American combat battalions have a large and well equipped command apparatus. In battle, the task force commander has a staff of up to 20 officers and some 30 non-commissioned officers, including attachments.<sup>49</sup> This staff is almost as large as the the staff of a Soviet regiment, which has 20-24 officers and 40 enlisted soldiers, including a handful of warrant officers.<sup>50</sup> The task force generally operates three command posts, main, tactical, and rear.

The NTC experience confirmed changes in the structure

of the task force control system. The battalion executive officer previously spent almost all his time dealing with task force logistics. Now he is located in the Tactical Operations Center (TOC, or main command post of the task force) where he can best coordinate the battalion's fight with other units and higher headquarters. This frees the commander, along with his operations officer, to direct the main effort from the battlefield. Other techniques such as orders groups and matrix orders have been incorporated to speed the complex command and control process necessary to synchronize the disparate elements of the task force.

#### PART V: ANALYSIS

A look at the Soviets' "Principles of Modern Combined Arms Combat" side by side with FM 100-5's "imperatives of the AirLand Battlefield" is instructive. I have included a side by side listing of both sets of principles in Appendix 1 (page 53) to illustrate the similar weight both American and Soviet officers accord to various facets of modern warfare. It isn't surprising that they are broadly similar, since for at least 15 years each side has regarded the other as the primary opponent.

In general terms, Soviet and American views on future battle are congruent. Taktika and FM 100-5 share strong similarities in the characterization of modern battle as "air-land" in character and as being extraordinarily lethal. I believe its valid to conclude that both Soviet and American Armies recognize that any battle between the two would be violent, highly mobile, and characterized by the

use of weaponry which neither army has completely mastered or integrated into its operations. Both forces envision operations in three dimensions and stress the employment of aviation assets. The latest edition of FM 100-5 provided impetus for the rebirth of "operational art" in the American Army, which, as Colonel L. D. Holder offers, had been an area of concentration left to our rivals for nearly 30 years.<sup>51</sup>

The impact of FM 100-5 is measurable. Taktika reflects the acceptance of "air-land" as an emerging and valid theoretical concept. The 1987 edition, in contrast to the earlier 1984 volume, devotes more attention to the low level meeting engagements, night meeting engagements, and the defense against counterattacks. In an article entitled "Soviets Size up Airland Battle", William Burgess makes the point that the 1984 edition of Taktika was "optimistic about the tactical commander's ability to pre-empt AirLand battle strikes." Since then, he argues, the Soviets have altered their beliefs. He cites Major General I. Vorobeyev's criticism of the 1984 Taktika, who essence said that the nature of automated systems like TACFIRE would speed up battle to such a point that "normative times" were "obsolete".<sup>52</sup>

But one should not jump to the conclusion that the Soviets are simply reacting to American doctrinal or technological developments. The Soviets, while clearly concerned by developing technologies, do not consider such



developments to have an operational impact until they have proliferated on the battlefield. In other words, limited quantities of a new weapon are not decisive.<sup>53</sup> One of the key themes which recurs in virtually every publication and lecture of the U.S. Army Soviet Army Studies Office (SASO) is that the Soviet doctrine is grounded in Soviet experience, and is evolutionary in nature.

Despite similarities in the general principles of future battle, one should never forget the totally dissimilar heritage and theoretical foundation of the Soviet Army. Fundamental differences between the Soviet and American doctrine remain in several areas. Not all of these differences have direct implications for the task force defense, but some deserve further analysis. Let's look again at some of the areas discussed previously.

#### **SURPRISE AND TEMPO**

Soviet tactical capabilities cannot be measured without including the value of surprise. Our defense calculations depend on sufficient time to structure the battlefield. But this fails to recognize the value which the Russians accord surprise. Soviet operational plans are keyed to achieving surprise. The greater the surprise, the higher will be the tempo of operations. Not only timing of the attack, but direction and strength will be carefully concealed from the U.S. defender. As discussed earlier, the result will likely be an attack against a partially prepared defense.

If we assume that the most probable form of a Soviet offensive would be an attack against a partially prepared

defense, what then would be the tactical form of that attack? Ideally, the Soviet plan for battle would surprise the defender and allow for the rapid penetration of the covering force by forward detachments in order to engage main defenses simultaneously with the covering force battle, and attack in depth with fires and air assault forces. A crucial point; the main effort is made possible by diminishing the weight of attack as the distance from the main effort increases.

Once some degree of surprise is obtained, the initiative must be maintained through tempo or the benefits of surprise dissipate. By overloading the opponent with multiple strikes, the Soviets will delay the recognition of secondary efforts until it is too late.

From the perspective of the task force commander, it is less important to speculate on how the Russians might achieve surprise than it is to understand the potential effects of surprise and high tempo operations on the amount of time available to prepare a defense. Regardless of the state of preparations or the covering force situation, the task force must be prepared to engage in active combat operations.

#### **COMBINED ARMS, MOBILE GROUPS, AND CLOSE BATTLE**

Soviet operational plans give far more shape to the tactics on the battlefield than similar level American plans provide. Although American doctrine holds that a task force can defeat a regiment, it does not follow that a Soviet army

commander (who determines regimental attack zones) will oblige by committing a regiment against each forward battalion task force. If his (the army commander's) mission is to break through to operational depth, then he will attempt to find ways to focus the majority of the combat power of a division against an isolated battalion. Terrain is not as important as the correlation of forces. If a penetration to great depth is not required, then assets will not be wasted.

In tactical terms, the defending battalion commander could expect to face one (or more) of the following situations; 1) attack by an army forward detachment, 2) attack by a divisional forward detachment, 3) attack by up to two regiments (depending on defensive sector width), and 4) a supporting attack carried out by a regiment or less. Figures 6 through 9 (pages 49-52) contain a series of diagrams which depict possible Soviet attack variations.

The details of the Soviet combined arms battle deserve attention. Soviet ideas of combined arms battle go beyond combining tanks with infantry. The balancing of all arms, including helicopters, with tanks and artillery, appears to be a growing concern in terms of future organization. We in the American Army tend to be very "machine" conscious and measure Soviet combat power in terms of numbers of BMPs and tanks. But as General Rotmistrov's speech emphasized, it is not the weight of armor which counts, but the balance of all arms (and particularly infantry) in accordance with tactical conditions which is important.

The composition of Russian maneuver units has major implications. If the BTR equipped regiment is organized to include combined arms shock groups or "shock subunits" in the manner suggested by General Rotmistrov, then these units would be well suited to execute that portion of close battle involving assault and reduction of defenses. Artillery support could be centrally managed at regiment, since the speed of advance of these elements would be keyed to the sequential massing of fire against battle positions. If we refer again to our U.S. balanced task force and examine the numbers of infantry available to the commander, we would come up with a figure of approximately 150 dismounted personnel. If we look at the BTR equipped regiment, we would find a total of 700 dismounted infantry.<sup>54</sup> This four to one advantage could be very important in the terrain of West Germany. The nine infantry companies of the regiment could become "shock subunits", working closely with tanks, sapper engineer units, heavy artillery, and mortars to reduce American companies piecemeal. The depth of defense and density of anti-tank weapons will determine the echelonment of the regiment. If a Soviet battalion is kept in second echelon, it will receive attachments only when committed.<sup>55</sup>

The tank and BMF regiments, along with the independent tank battalion, may form mobile groups, task organized and trained for more decentralized combat at the battalion level. The division independent tank battalion, (which

today comprises 51 tanks in five companies), reinforced by a BMP and artillery battalion (three rifle companies, three howitzer batteries, and one mortar battery), might become the forward detachment of the division and execute a deep tactical mission. The attack helicopters of the division would support the forward detachment. The remainder of the BMP regiment (two rifle and one tank battalion) might follow the forward detachment and be assigned the mission of conducting tactical exploitation to destroy artillery and command posts. The tank regiment might be retained to conduct operational penetration through the wake of the assault BTR units and beyond the disruption caused by the lead mobile groups.

At army level, a forward detachment might be built around the independent tank regiment, which today consists of three tank battalions with 150 tanks total, and a BMP battalion with 43 BMPs.<sup>54</sup> When committed, this unit might be reinforced by one or more artillery battalions, a multiple rocket launcher battalion, and assorted engineers and air defense. It would also be supported by the army attack helicopter regiment, which deploys 40 Mi-24 HIND and 20 Mi-8 HIP aircraft. The likelihood is high that the army forward detachment would operate in conjunction with an army level air assault unit of battalion size. Obviously, this would be a formidable striking force.

The nature of combat against forward detachments, or indeed, against any "mobile group" is misunderstood. Forward detachments are seen as advanced guards, and combat

with them is seen as an extension of combat against a Soviet regiment. They are not advance guards. Forward detachments will use high speed column tactics and avoid battle with defending forces, unless their mission calls for it.

The U.S. Army has experience dealing with at least one forward detachment; Battlegroup Peiper spearheaded the 1st SS *Panzer* Division's assault in the Ardennes in 1944. Fortunately for U.S. forces, the remainder of the 1st SS *Panzer* Division was prevented from joining Battlegroup Peiper. The impact of even one forward detachment was felt all the way to 12th Army Group headquarters.<sup>57</sup>

The concept of forward detachments is not addressed in any detail in our doctrine. Their presence may compel the defending task force to engage a forward detachment while the covering force battle is still in progress (see figure 7). If a forward detachment is to be halted, it will have to be heavily engaged by forces from the task force initially, and possibly by brigade and divisional reserves such as attack helicopters. Since forward detachments will normally operate in the zone of the tactical main attack, this means that a task force engaging a forward detachment will not be in a favorable position to engage following motor rifle or tank regiments conducting the main attack. The task force must be given the flexibility to conduct mobile operations to pin the forward detachment while the covering force delays the advancing main attack. If there is no substantial covering force, then the task force must

conduct operations designed to halt the forward detachment, and rely on brigade to stop the remainder.

Forward detachments multiply by several times the threat to the task force rear area, particularly if they operate in conjunction with air assaults. Command posts and trains can either be organized to fight or tuck in behind maneuver units. The size of the main command post and combat trains make it difficult to accomplish the latter, while the lack of heavy weapons mitigates against the former. In any case, the task force must proceed under the assumption that these rear elements may find themselves involved in combat actions with substantial forces simultaneously with the maneuver teams.

The extensive use of helicopters by the Russians poses a significant threat to the all elements of the task force. Soviet writings indicate that up to 25% of all fires may come from close support helicopters.<sup>20</sup> A Soviet attack helicopter squadron organic to the division might use between two and six armed helicopters to strike a company team detected in movement. Close support aircraft such as the SU-25 might be included in the attack, if the target was important. Larger strike packages should be expected in support of army forward detachments, with 16-24 aircraft involved.

In order to move, the task force must be prepared to engage air threats. In the near term, air defense protection available to the task force will consist of shoulder fired missiles, automatic cannon fire, and small

arms. The lack of effective air defense may have the consequence of severely restricting movement of friendly forces, precisely when they must move.

#### FIRE SUPPORT

The improvements to Soviet artillery are significant beyond fire support terms. Mobility and protection prolong the life expectancy of Russian artillery in the face of rapid U.S. counterfire. The increased range of army and front artillery permits massing of fires laterally and from greater distances behind advancing Soviet columns, while increasing numbers of self-propelled armored artillery units permit direct attachment of more artillery units to maneuver battalions and forward detachments. The close integration of artillery with maneuver arms in turn eases the artillery requirements for neutralizing defenses, because the Soviets depend on direct observation of targets by artillery commanders to synchronize fires during the accompaniment phase of fire support.

Protecting the force from the fire strikes of the attacking Soviet force should be the first consideration of the task force commander. Task forces positioned in likely main effort sectors must be reinforced with sufficient engineer units to allow very rapid preparation of protected positions. A survivability priority for task force elements must be incorporated into plans. Other measures such as reverse slope defenses must be adopted whenever feasible.

When extensive engineer support isn't available, the



armor on an M2 Bradley may be the only protection available to the infantry during Soviet fire strikes. Separating the infantry from the tracks may work if adequate time is available to prepare positions, but would be risky in view of the potential effects of Soviet artillery on infantry occupying hasty positions. The M1 and M2 are well protected against indirect fire. This advantage should be exploited by practicing rapid repositioning of companies to avoid indirect fire and keeping the infantry near the carriers where immediate protection is available, at least until positions with overhead cover are completed.

The task force commander must not forget that the Soviets intend to alter the "correlations of forces" through fire support. Systemic analysis of Soviet forces has spawned emphasis on counterfire to disrupt Soviet fire support. Colonel Tom White's article, "Disrupting the Tempo of Soviet Operations", points out the critical importance of fire support to Soviet maneuver success, and the absolute necessity to keep Soviet artillery from dominating the close battle.<sup>59</sup> Brigade and division commanders must devote sufficient resources to the counterfire. Without such support, the task force(s) facing the main effort will be rapidly overwhelmed.

#### SECURITY OPERATIONS

Protecting the force also entails degrading the Soviet reconnaissance capability by every possible means. Counter-reconnaissance can be divided into active and passive measures. We must not fall into the trap of assuming Soviet

ground reconnaissance is the end-all to providing the Soviets intelligence. During the Second World War, for example, 30% of all air sorties were reconnaissance flights.<sup>40</sup> The Soviets admonish commanders to make full use of a spectrum of intelligence gathering sources. Our operations security (OPSEC) must be equally broad band.

This is not to deny that the importance of the ground recon battle. It is vitally important to the Soviet commander, and may be important enough to mount reconnaissance in force operations by companies and battalions to get the necessary information. The Soviets recognize that reconnaissance in force may just as easily convert to spearheads if the situation develops favorably.<sup>41</sup>

The counter-reconnaissance battle is a potentially violent fight waged before and during the clash of main elements. This may be a mission which the task force can accomplish with an ad-hoc force built around the scout platoon. But doing it in such a manner will prevent the acquisition of key intelligence on the enemy. The task force commander may see in excruciating detail the counter-reconnaissance battle, but miss the more important information his own reconnaissance could provide him if not involved in the security battle. My conclusion is that company teams will probably be required to conduct counter-reconnaissance operations while scouts conduct intelligence operations. FM 71-2 offers this as a possible solution.

There is a trade-off in assigning a company team to

this mission. There may be too many avenues to cover to send a company forward and still maintain an effective reserve. The company team used in a forward role may not be available to reconstitute the reserve, given the Soviet proclivity for forward detachments. Likewise, the makeup of the task force may limit the commander's options.

#### COMMAND AND CONTROL

The Soviets have a potential problem with quantification of the unknowable. In order to use normative solutions in combat situations, the Soviet commander is critically dependent on reconnaissance. As the battlefield becomes more and more disorderly, the amount of usable intelligence will decrease. To account for intelligence gaps, the Soviets will plan for a large fudge factor in lieu of hard information. If American task forces prove particularly adept at the counter-reconnaissance battle, it is likely that the Soviets will resort to reconnaissance in force, a technique which was often used in World War II.<sup>42</sup> However, this is not the preferred method of gaining intelligence, and will be undertaken only at the direction of the higher commander.<sup>43</sup>

The problem of conducting operations against an elusive opponent impacts directly on the Soviet battalion commander. The difference between what the Russian battalion commander expects on the battlefield and what he gets may be critical to the success of the Soviets in achieving an operational breakthrough.

"The command and control problem is particularly acute

at subunit level. Battalion commanders....are often young and inexperienced, and they are aided by a staff comprising only four officers and praporshchiki (warrant officers) and nine other ranks.

This does not matter as long as the battalion is operating as a mere cog in a regimental machine. It matters very much indeed, however, when the battalion is acting in an independent or semi-independent capacity, for instance as a forward raiding or outflanking detachment, or as an advance guard."♦♦

Here may be the Achilles heel of high tempo fluid Soviet operations, if we can find ways to exploit it.

#### PART V: CONCLUSIONS

However desirable a fully prepared defense may be, the Soviets will dictate the time, place, and strength of the attack and will do everything conceivable to achieve surprise. Although total surprise is unlikely, extremely short warning is not, and consequently, many, if not the majority of main battle area task forces and covering forces will be engaging from only partially prepared positions. One solution to this problem would be the fortification of the Inter-German Border, thereby eliminating the preparation time. This is not politically acceptable to the West German government. Therefore, training scenarios should be modified to reflect an attack on a partially or unprepared defense, assuming varying degrees of surprise.

Close combat doctrine for the heavy task force should be modified to recognize the tailored, combined arms nature of the Soviet attack. We must stop considering the Soviet regiment in isolation and begin looking at the total tactical picture. A Soviet regiment does not fight alone but performs missions as part of a coherent operational

plan. The actual force against which the task force defends may run the range of forces from reconnaissance elements, to mobile groups, to reinforced regiments conducting a "doctrinal" attack. Examining a Soviet regiment in the attack is useful as a starting point and prevents "mirror imaging", but should not be the sole basis of our tactical defensive doctrine.

Intelligence estimates should also include an evaluation of forested and urban terrain. The Soviets have the necessary infantry and artillery to exploit less desirable avenues of approach, and are apparently considering ways to make use of them. The task force plan should at least address surveillance and contingency measures for these areas. From the brigade perspective, sector responsibility must not be solely based on high speed avenues, but on a detailed assessment of Soviet capabilities.

If the NTC is to continue realistically simulating the next armored battlefield, then resources must be provided to allow a full range of potential enemy capabilities to be duplicated. The full combined arms threat should be presented, not just the major vehicle systems. It is unrealistic to believe that such an upgrade could be completed in the near future. But alternatives are available. Artillery strikes should be planned by the OPFOR exactly as their Soviet counterparts would plan them, and then be executed through fire support mechanisms.

Consideration should be given to converting the current OFFOR BMP regiment to a tank regiment, which would more nearly align the numbers of personnel carriers and dismounted infantry available with what the actual enemy unit would employ.<sup>45</sup> Forward detachment scenarios and vertical envelopments should be used in training rotations along with the current selections. Defense problems should limit the amount of preparation time available to task force. Greater numbers of attack helicopters should be provided for OFFOR main attacks and mobile groups.

Soviet attack helicopters will make the battlefield a hazardous place for friendly units. The near term solution to our air defense shortages lies in improving our camouflage discipline when stationary, and developing air defense drills for movement. Air overwatch of tanks by designated Bradleys and proficiency with .50 caliber machine guns will assist movement.

The continued modernization of Soviet fire support must be examined by Americans not only in terms of its absolute quantity, but in terms of its potential to change correlation of forces. If Soviet offensive operations are to have any chance of success, Soviet fire support must be extremely effective in neutralizing a considerable portion of the U.S. tactical defense. From the task force perspective, the success or failure of the deep battle may well hinge on American counterfire. The counterfire program is therefore of critical importance to the task force commander.

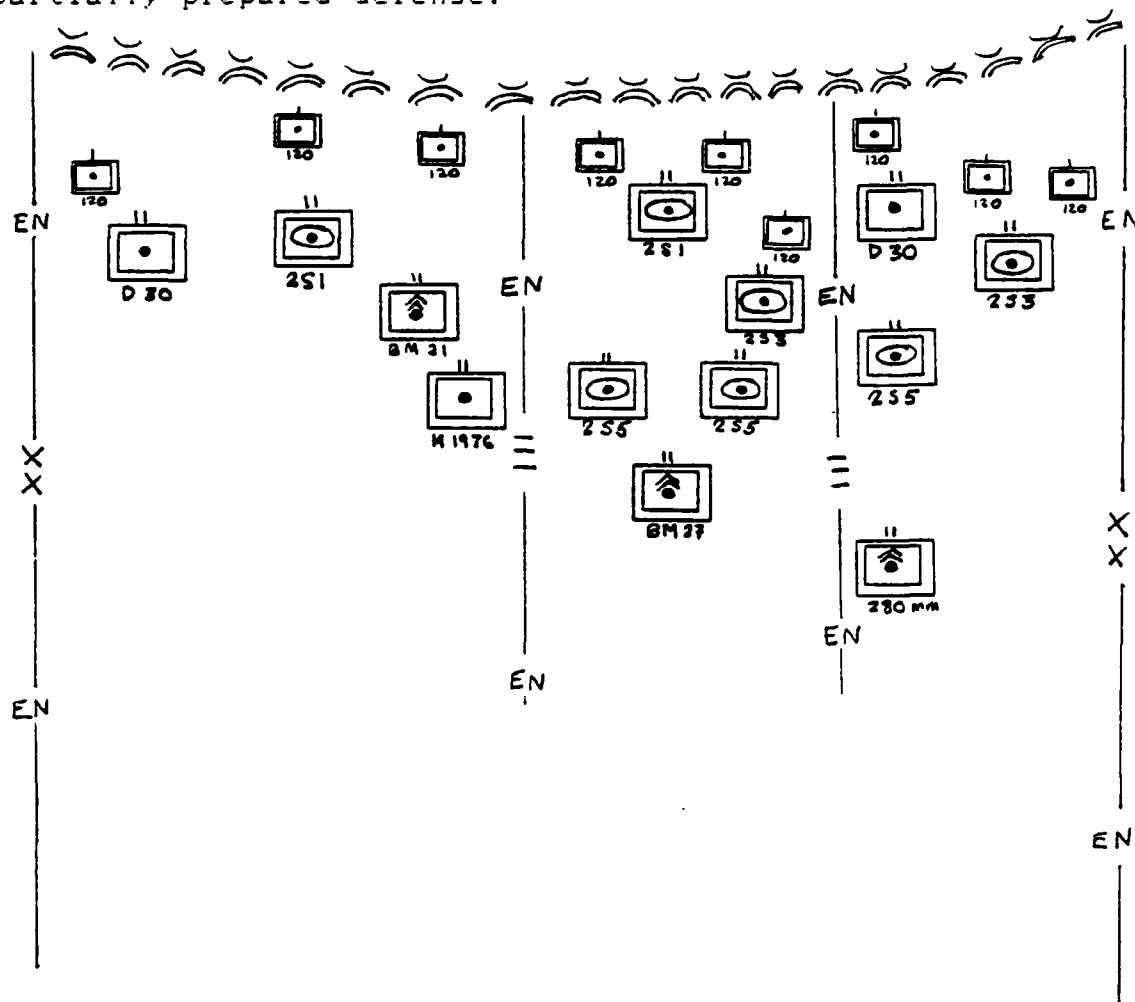
While the NTC suffers from resource constraints, battalion level simulations are almost totally open ended. Command post exercises offer the best near term means of studying emerging Soviet doctrine and its possible effect on the task force. Excellent products are available to commander that make it possible to conceptualize the dynamic nature of Soviet tactical doctrine. Simulations refine operating procedures and plans within the scope of a sophisticated and flexible operating framework.

If there is a bottom line to this monograph it is that American task force doctrine is fairly comprehensive, and describes in some detail what a task force must do in defense. When applying it, caution must be exercised to avoid visualizing battle as a series of discrete engagements between conveniently categorized elements. It is only too easy to arrive at the belief that by looking at terrain and "doctrinal" factors, one can predict Soviet offensive behavior. But war is a two sided business, and we should not presume that a Russian would be so obliging. We must develop a mindset which recognizes the fluidity of battle, and an awareness of the simultaneous nature of high intensity combat. We have written about non-linear battlefields since the inception of AirLand battle. If we engage the Soviets in combat we will have every opportunity to experience one.

### Artillery Densities:

1. Against prepared defenses on main axis...100-200 weapons per kilometer.
2. Against hasty defense on main axis...70-80 weapons/km
3. On a supporting axis...45 weapons/km

Artillery support of a main axis division attacking a partially prepared defense.



*No AAG is formed. The army and front provide 88 guns and howitzers, plus one Bn each of BM-17 and 160mm multiple rocket launchers. The division now has approx. 3-5 weapons capable of delivering 17,500 rounds weighing 870,000 kg in a 15 minute prep. Close air support is also provided.*

Figure 1: Artillery support of forces making the main attack. (extracted from the British Army Field Manual: Soviet Operations, Part 1: pages 8-1 thru 8-10).



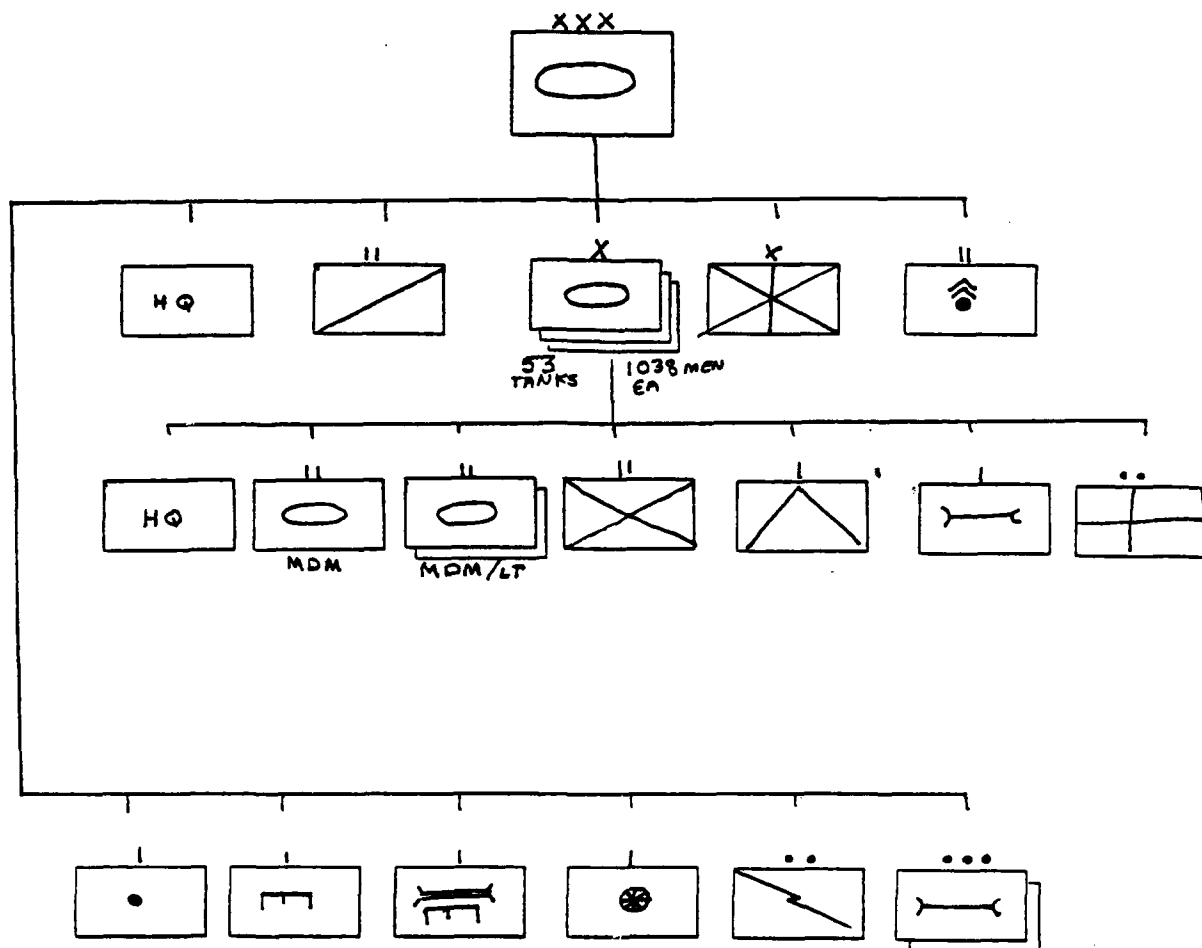


Figure 2: Soviet Tank Corps of 1942 type. Taken from Toward Combined Arms Warfare, by Jonathan M. House: page 101.

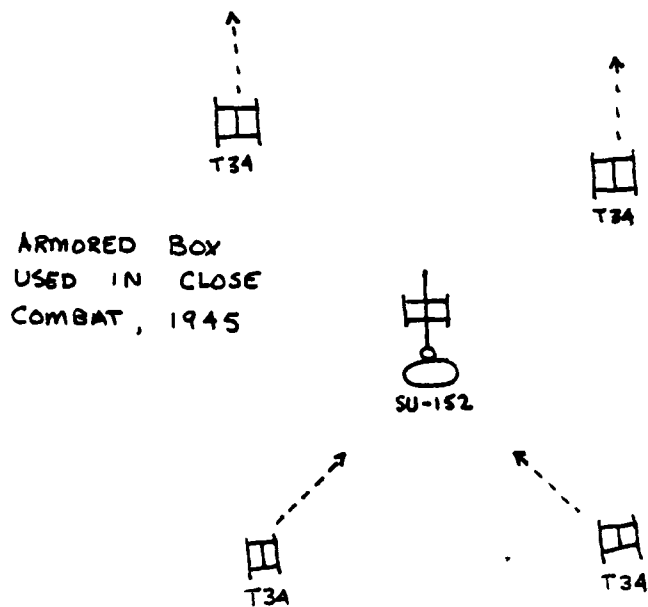
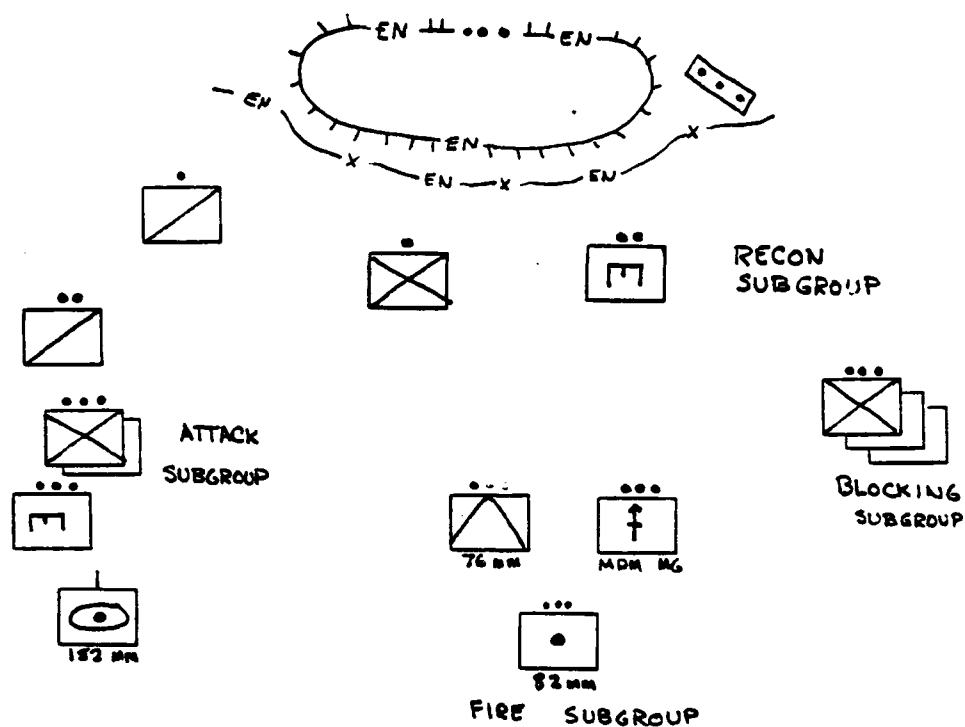


Figure 3: Soviet "shock subunit" circa 1945. Derived from Rotmistrov's speech and Toward Combined Arms Warfare. Jonathan House; page 124.

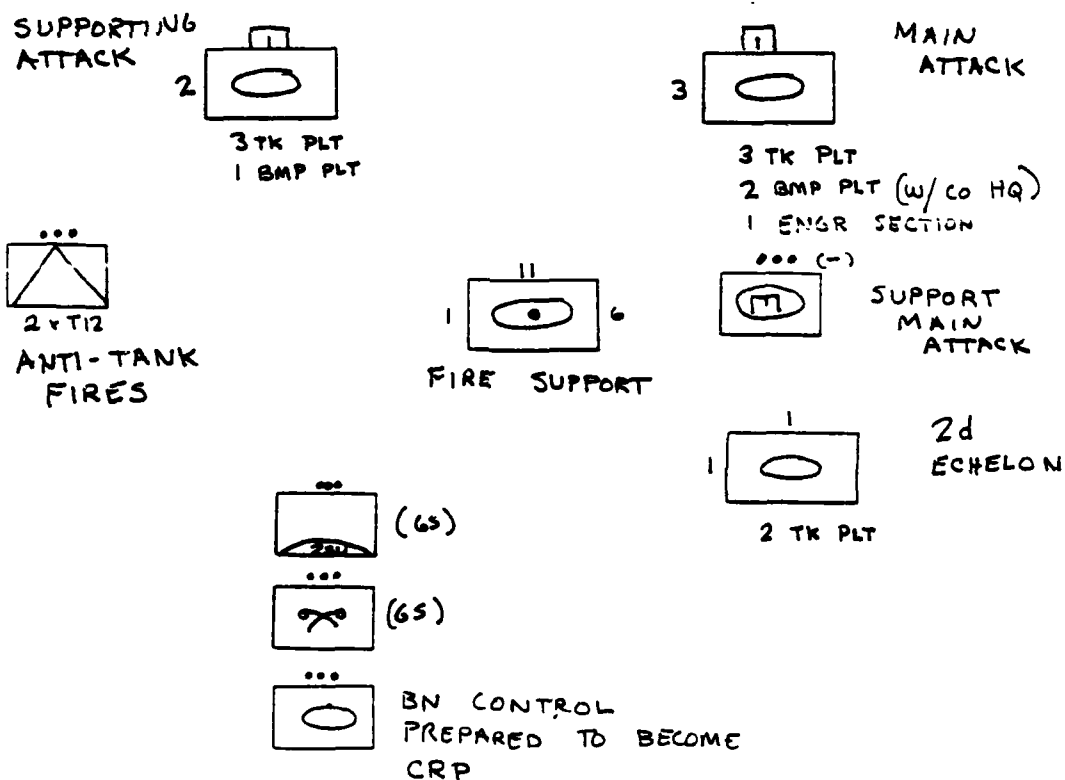
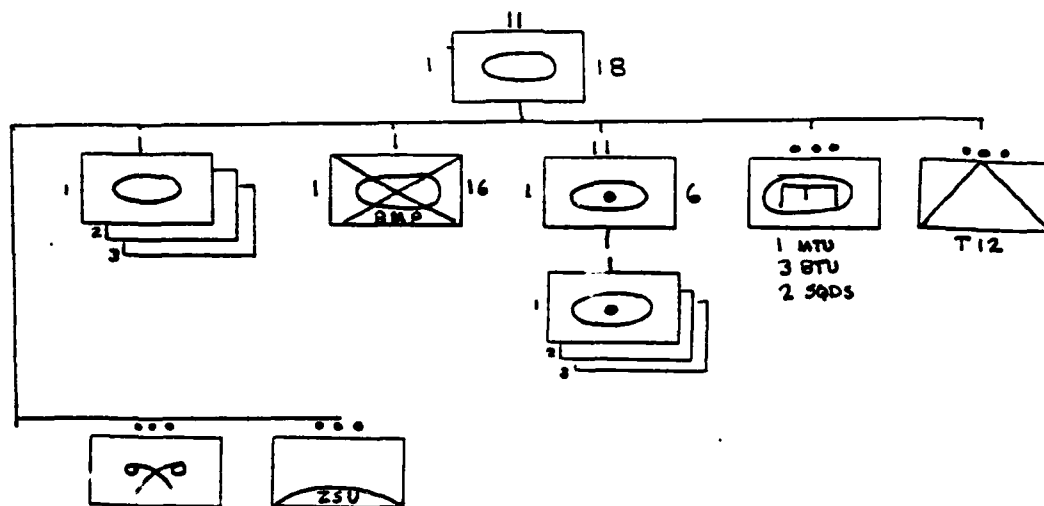
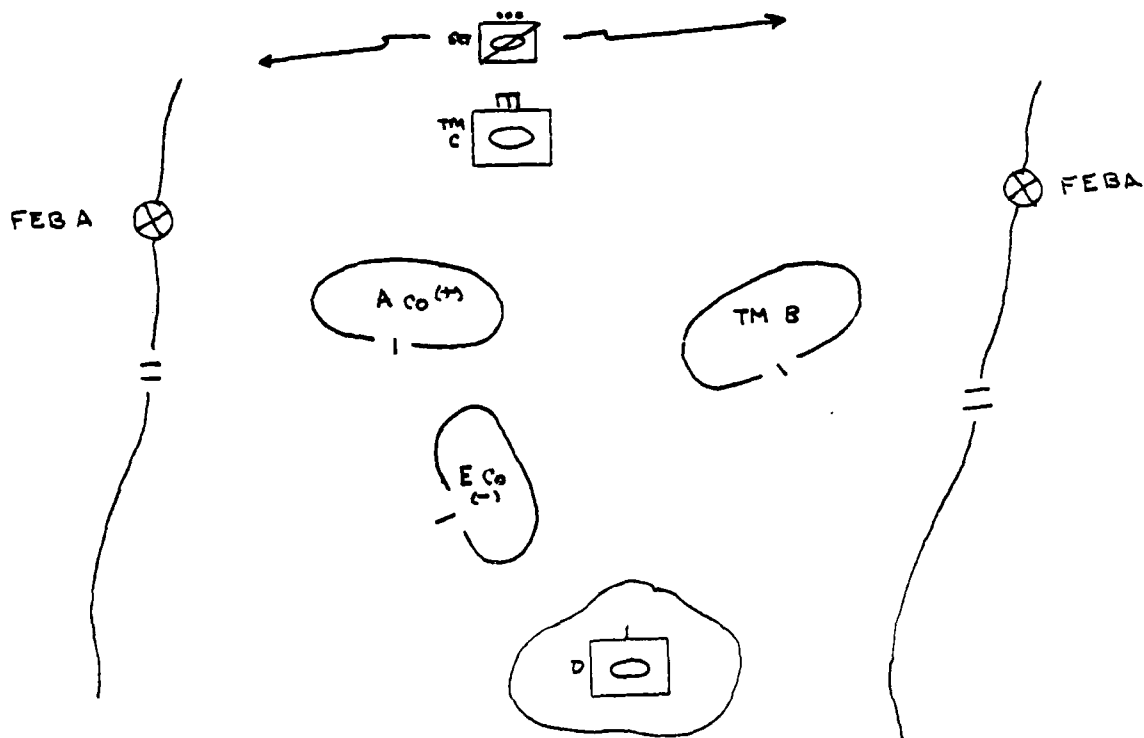
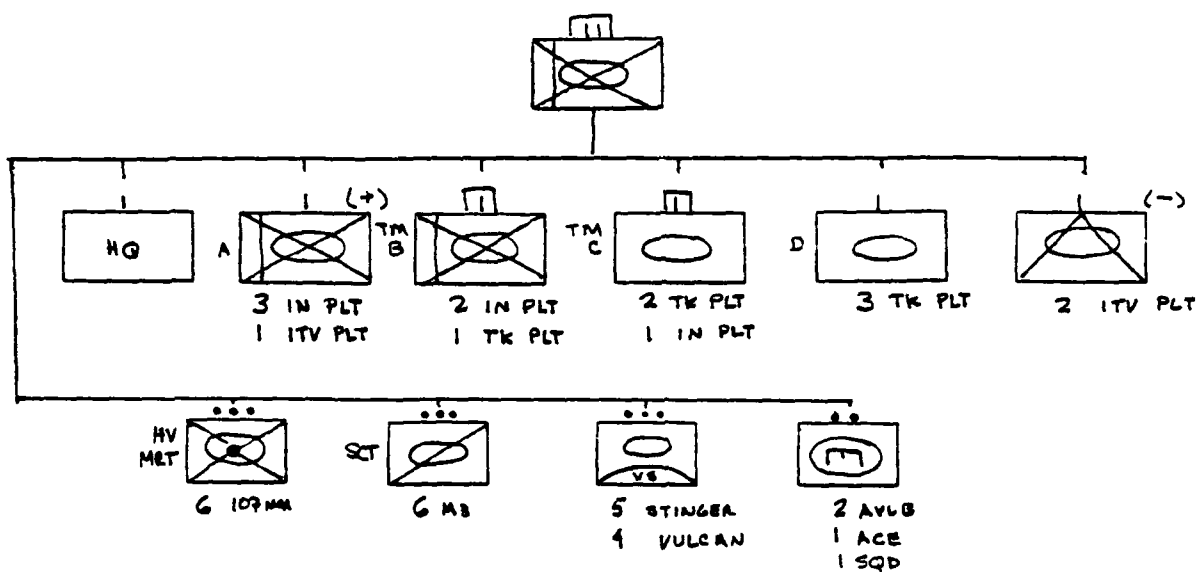
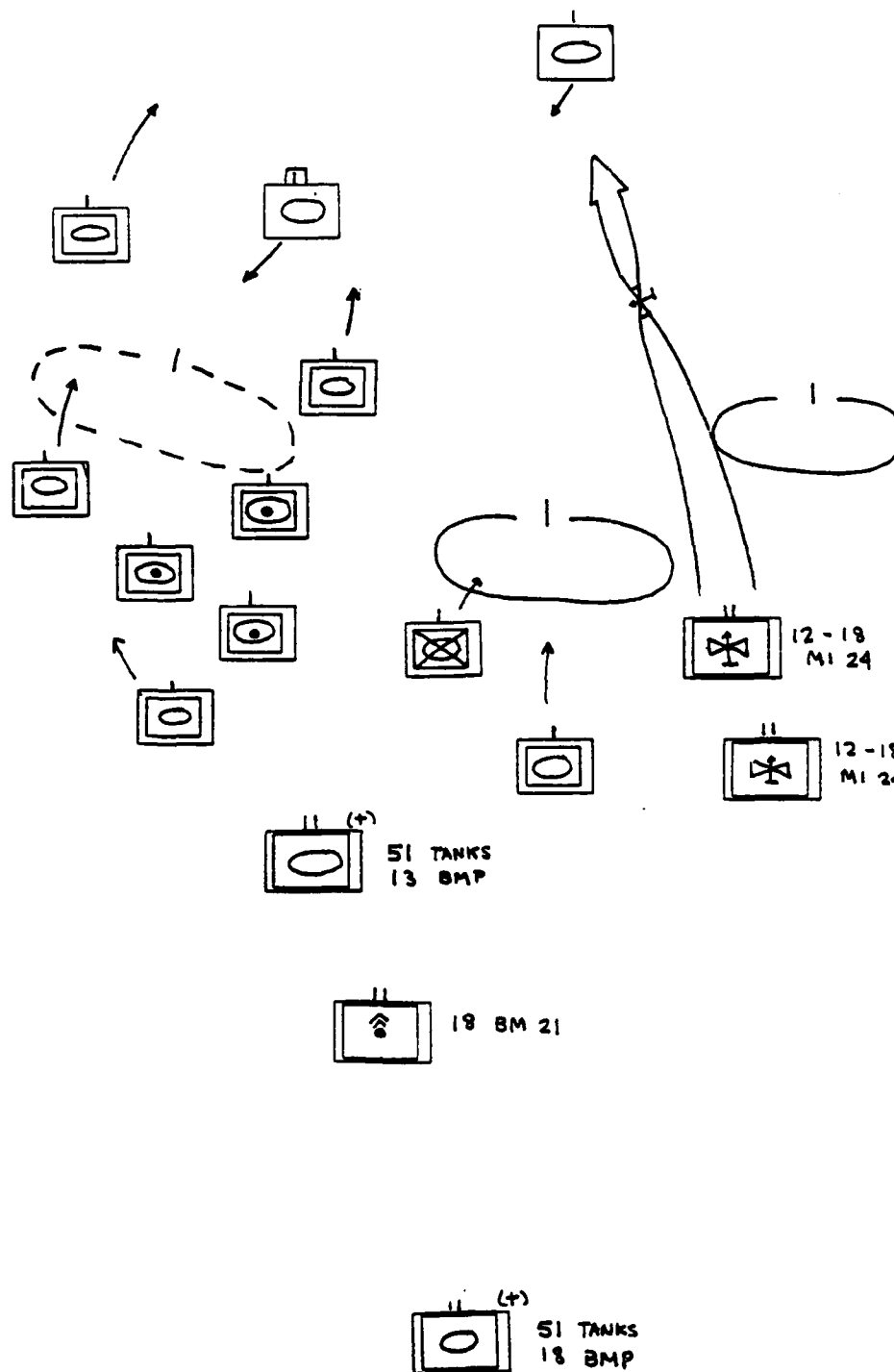


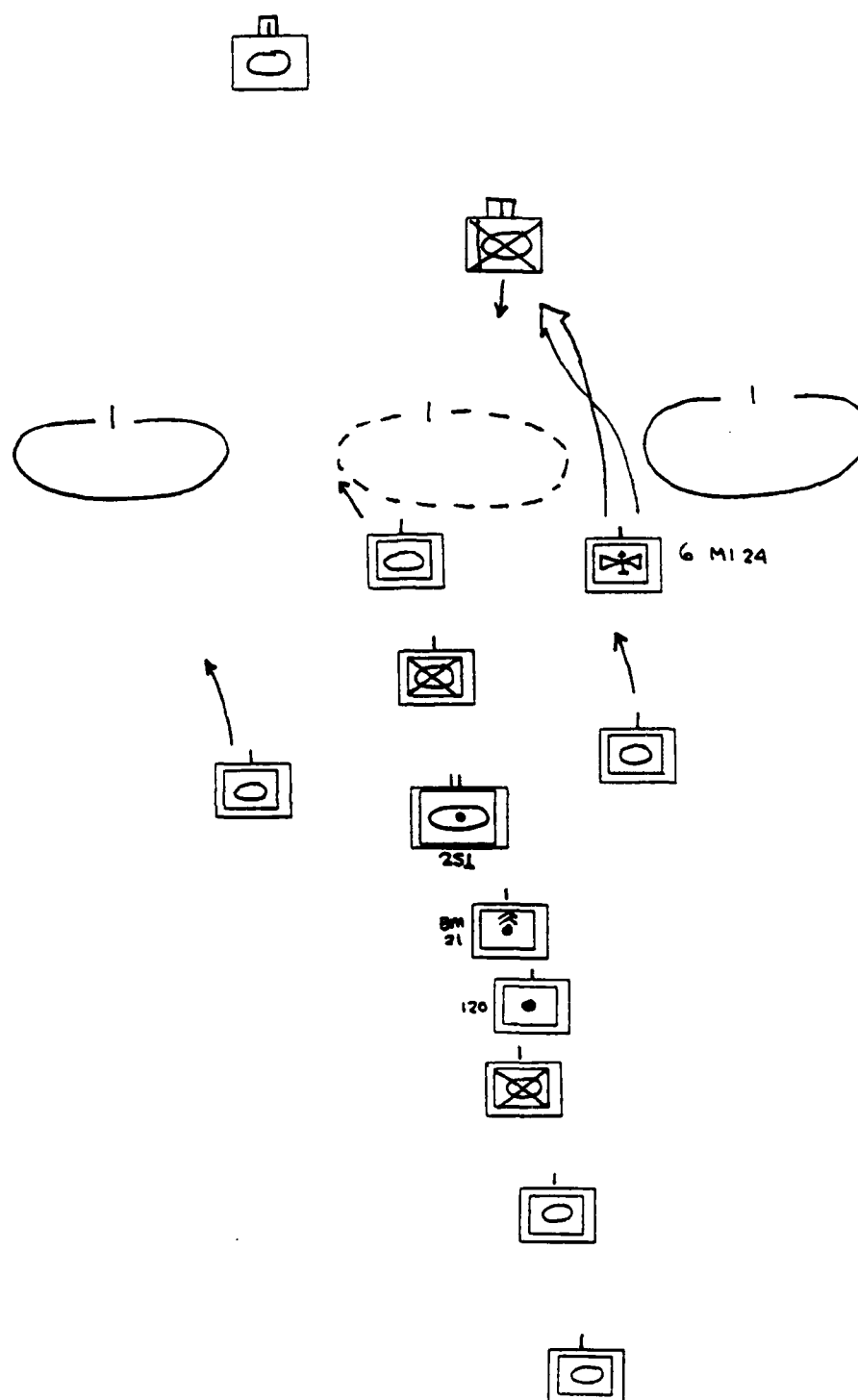
Figure 4: Soviet tank battalion organized for assault.  
 Taken from The Tank (Motor Rifle) Battalion in the Attack.  
 D.A. Dragunsky: page 55-60



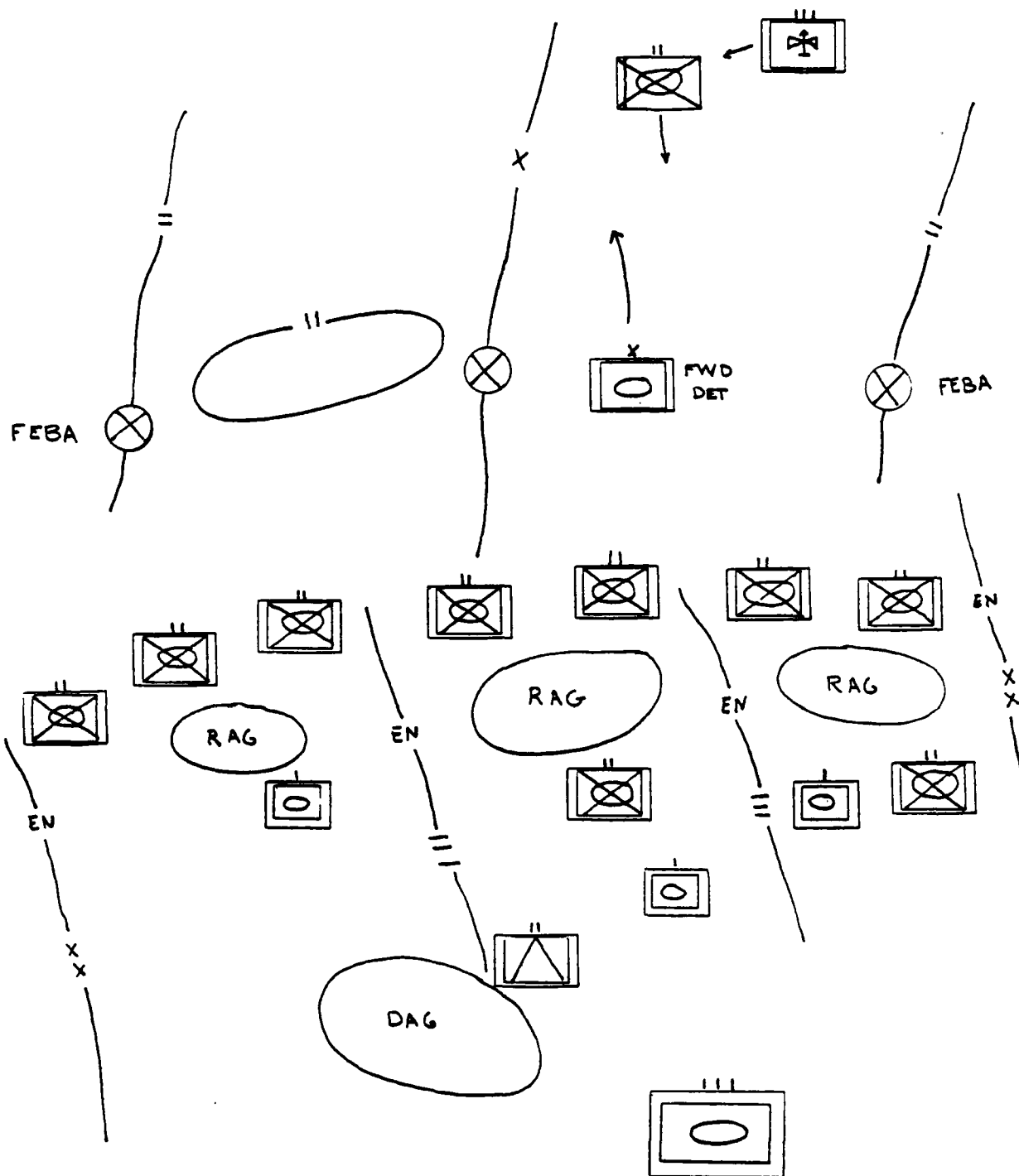
**Figure 5:** A balanced mechanized task force organized for defense.



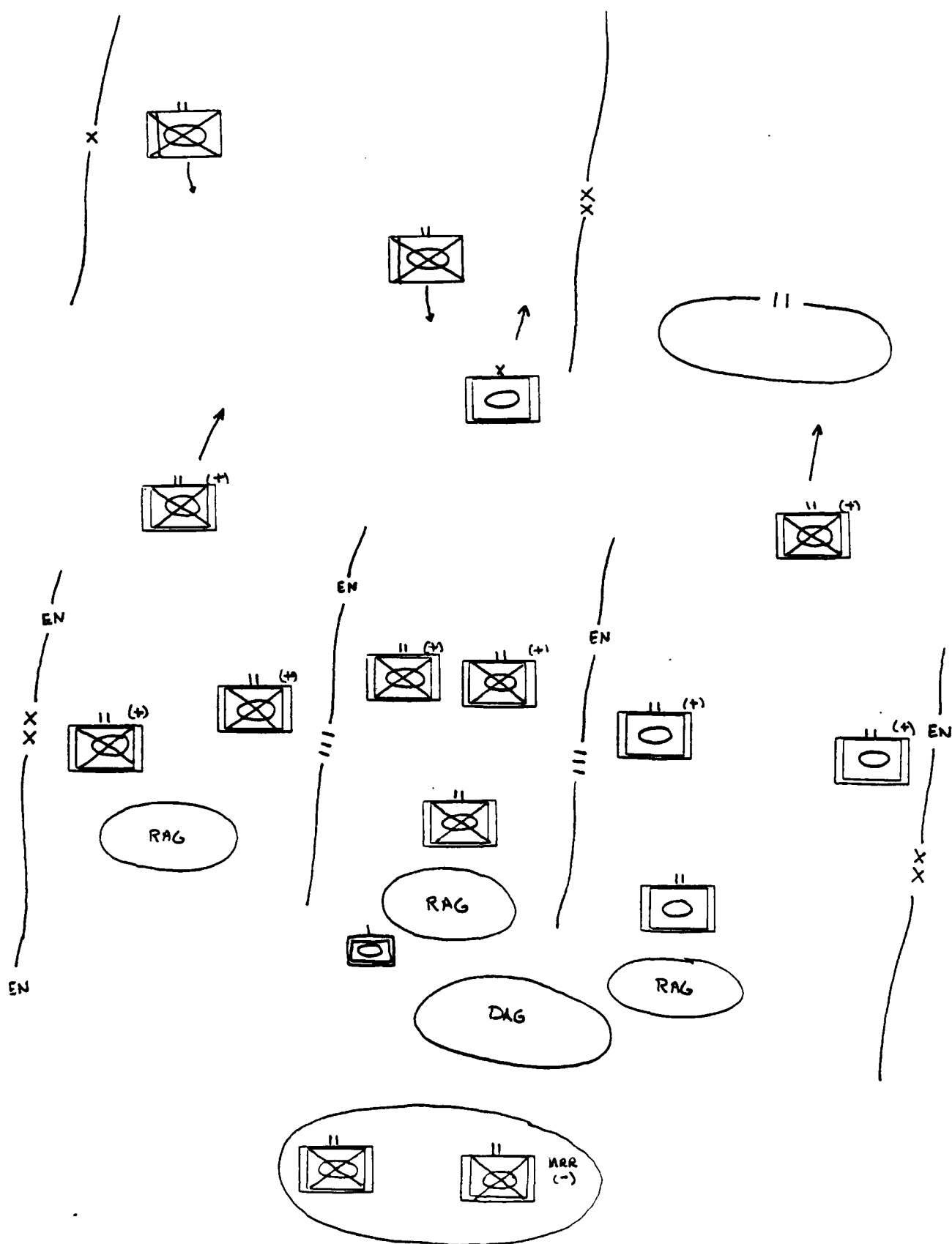
**Figure 6:** Attack against a defending task force by an Army forward detachment consisting of an independent tank regiment (corps).



**Figure 7:** Attack against a defending task force by a divisional forward detachment consisting of an independent tank battalion (brigade). Based upon "The Soviet Conduct of War", by Colonel Glantz, SASO.



**Figure 8:** Soviet Division conducting the main attack against a partially prepared U.S. defense. Based upon "The Soviet Conduct of War", by Colonel Glantz, SASO, and Soviet Operations, British Army Field Manual.



**Figure 9:** Soviet Division conducting a supporting attack against a partially prepared U.S. defense: based upon Soviet Operations. British Army Field Manual.



## **APPENDIX**

### **Soviet Principles of Combined Arms Combat:**

- 1) Constant high combat readiness formations, units, and subunits.
- 2) High aggressiveness, decisiveness, and the uninterrupted conduct of battle.
- 3) Surprise in operations. (most important principle)
- 4) Coordinated joint use of branches of troops and special troops in combat, and maintenance of continuous interaction between them.
- 5) Decisive concentration of the main efforts of the troops on the main axis at the needed time.
- 6) Maneuver by subunits and units, and by nuclear and fire strikes.
- 7) Thorough consideration and utilization of moral, political, and psychological factors in the interests of carrying out the assigned mission.
- 8) Comprehensive support to combat.
- 9) Maintenance and timely restoration of the combat capability.
- 10) Firm and continuous troop control and persistence in attaining planned goals and in fulfilling adopted decisions and assigned missions.

### **AirLand Battle Imperatives**

- 1) Ensure unity of effort
- 2) Anticipate events on the battlefield
- 3) Concentrate combat power against enemy vulnerabilities
- 4) Designate, sustain and shift the main effort
- 5) Press the fight
- 6) Move fast, strike hard, finish rapidly
- 7) Use terrain, weather, deception, and OPSEC
- 8) Conserve strength for decisive action
- 9) Combine arms and sister services to complement and reinforce
- 10) Understand the effects of battle on soldiers, units, and leaders

## ENDNOTES

1. Defense 88 Almanac, September/October, (Washington D.C., 1988) , p.26.
2. Glantz, David M., "Soviet Offensive Ground Doctrine Since 1945", (Ft. Leavenworth, Kansas, 1988) p. 31-32.
3. Glantz, David M., "The Nature of Soviet Operational Art", Parameters. Spring 1985. p.4.
4. Army Field Manual, Volume II-Part 2, Soviet Operations, (London, England, April 1986), p. 2-1 thru 2-9.
5. Reznichenko, V. G., Taktika, (Moscow, 1987), p. 75.
6. Ibid., p. 20.
7. Hines, John G., Soviet Front Operations In Europe-Planning for Encirclement, (Ft. Leavenworth, 1988). Hines argues that the Soviets would encircle, rather than attempt to break through the powerful U.S. forces.
8. Army Field Manual, Volume II-Part 2, Soviet Operations, op.cit., p. 4-6.
9. Donnelly, C. N., Lecture given to the officers of the VII (US) Corps in 1985 at Kelly Barracks, Stuttgart, FRG.
10. Simpkin, Richard, Race to the Swift, (London, 1985)
11. Koziej, S., "Anticipated Direction for Change in Tactics of Ground Troops, Soviet Future War, (Ft. Leavenworth Originally published in September 1986, translated in 1987, published in April 1987), p.4 thru 9.
12. Holcomb, James F., "Recent Developments in Soviet Helicopter Tactics", (Soviet Studies Research Centre, RMA Sandhurst, March 1988), p. 12 thru 14.
13. Dragunskiy, D. A., The Motorized Rifle (Tank) Battalion in Combat (Moscow, 7 April 1986) JPRS, UMA-88, 24 Mar 1988, see tactical examples.
14. Holcomb, James F., op.cit., p. 11, 18, 19.
15. Taktika, 1987, op.cit., p. 15, 83, 95, 96.

16. Hines, op.cit., p.18 thru 21. Hines uses the "Voroshilov Papers", recently declassified, for much of his analysis. Also included in the analysis was a normative graph showing probable attack success as a function of tank/anti-tank density. In calculating the correlation of forces, the Soviets consider the ratios in both the specific attack sector and in depth through the defense. Noted Soviet researcher C. N. Donnelly points out that while advanced tank protection modifies the outcomes, it isn't enough to insure success.
17. Glantz, David M., "The Nature of Soviet Operational Art", op.cit., p.6. For a fascinating discussion on the use of forward detachments in the Manchurian campaign, see Colonel Glantz, August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945, Leavenworth Papers No. 8, (Ft. Leavenworth, Ks., June, 1983)
18. Glantz, David M., "Soviet Operational Formation for Battle-A Perspective", Soviet Military Readings, (Ft. Leavenworth, 1988), p.45 thru 48.
19. Smith, D.L., and Meier, A.L., "Ogarkov's Revolution", International Defense Review, July 1987. p.870.
20. Reznichenko, V. G., Taktika, (1987), op.cit., p. 13.
21. Glantz, David M., "Force Structure in Light of Contemporary Requirements", (Unpublished, Ft. Leavenworth, 1988), p. 9 thru 10.
22. Ibid., p. 11.
23. "Speech of Marshal Rotmistrov at 1946 Conference on Berlin Operation", Reprinted in USSR Report - JPRS VMA 86-009, Sep 85, p. 25. Colonel Glantz also emphasizes the importance of this speech in current Soviet developments. See also Glantz, "Force Requirements", op.cit., p. 8.
24. Glantz, David M., "Soviet Offensive Ground Doctrine Since 1945", (Ft. Leavenworth, Ks., SASO, 1987. Republication of an article which appeared in Air University Review, 1983) Also, "Force Structure in Light of Contemporary Requirements", op.cit..
25. Dragunskiy, D. A., op.cit., p. 2 thru 11.
26. Reznichenko, V. G., Taktika, (1987), op.cit., p. 89.
27. Dragunskiy, D. A., op.cit., p. 29.
28. Soviet Army Studies Office, "Impact of the Dialectical Process: Periods of Military Development.", (Ft. Leavenworth, April 1987), p. 10.

29. Reznichenko, V.G., et al., Taktika, (Moscow, 1987), p. 6 thru 10. The view of the Soviets towards nuclear weapons must be considered as a two sided issue. The Soviets are fully cognizant of the political value of nuclear armament, and the risks inherent in a nuclear armed world. See Kennedy, Paul. The Rise and Fall of the Great Powers, (New York, 1988), p.500 thru 510. The Soviet military has evolved from a "nuclear" use policy to one which is "nuclear scared". See Donnelly, C. N., "The Development of Soviet Military Doctrine", Soviet Military Readings, (Ft. Leavenworth, 1988), p.1 thru 8. See also Glantz, "Soviet Ground Doctrine" op. cit..

30. Donnelly, C.N., "The Soviet Operational Maneuver Group: A New Challenge for NATO", Soviet Military Readings, (Ft. Leavenworth, 1988), p.9 thru 26.

31. Smith, D.L., and Meier, A.L., op.cit., p. 869.

32. Burgess, William, "The Soviets Size Up AirLand Battle", Army, July 1986, p. 47. Burgess refers to an article published by Major General I. Vorobiev, of the *Frunze Academy*, in October of 1985.

33. Reznichenko, V.G., Taktika, op.cit., (Moscow, 1987), p.78

34. Koziej, S., op.cit., p. 6 thru 7.

35. FM 100-5, Operations, (Washington D.C., 1986), p. 2.

36. Was De Czege, Huba, "Understanding and Developing Combat Power", AMSP Course 2 Tactical Dynamics Readings, (FT. Leavenworth, 1988), p. 6.

37. FM 100-5, op.cit., p.19.

38. FM 71-2, The Tank and Mechanized Infantry Task Force, (Washington, D.C., January, 1988), p. 4-2.

39. Romjue, John L., From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1973., (Ft. Monroe, Virginia, 1984), chapter 1.

40. FM 71-2, op.cit., p. 1-7.

41. FM 100-15, Corps Operations, (Washington D.C., 1988), p. 6-1.

42. Student Text 100-9, The Command Estimate, (Ft. Leavenworth, Ks., July 1987), p. 4-10.

43. FM 71-2, op.cit., p. 4-6.

44. Ibid., p. 4-6
45. FM 71-2, op.cit., p. 4-23.
46. Saint, Crosbie E., and Yates, Walter H., "Attack Helicopter Operations in the AirLand Battle: Close Operations", Military Review, June 1988, p. 2 thru 15.
47. FM 71-2, op.cit., p. 4-3.
48. Center for Army Lessons Learned, Interviews and issue materials.
49. FM 71-2, op.cit., p. 2-2 thru 2-6. The officers are: The XO, S-1, S-2, asst S-2, S-3, S-3 air, chemical officer, two liaison officers, ALO, FSO, engineer, air defense, S-4, BMO, signal officer, surgeon, and chaplain. The HHC commander and XO also assist the staff. Most of these staff officers are assisted by one or more NCOs. For example, the S-3 has 7 NCOs, and the S-2 has 3.
50. Figures derived based on data given in FM 100-2-3, op.cit., p. 4-13.
51. Holder, L. D., "Catching Up With Operational Art", AMSP Course 3 Readings The Contemporary Practice Of Operational Art, (Ft. Leavenworth, 1988), p. 4.
52. Burgess, William, op.cit., p. 46, 47.
53. Soviet Army Studies Office, "Soviet Future War", (Ft. Leavenworth, 1987). Insights derived from reading all five articles.
54. FM 100-2-3, op.cit., p. 4-2.
55. Dragunskiy, D. A., op.cit., p. 31.
56. Soviet Operations, op.cit., Annex D.
57. MacDonald, Charles B., A Time For Trumpets, (New York, 1985). The escapades of Kampfgruppe Peiper are described throughout the book.
58. Taktika, 1987, op.cit., p. 83.
59. White, Thomas E., "Disrupting the Tempo of Soviet Operations", Military Review, November 1987. p. 2 thru 11.
60. Soviet Operations, op.cit., p.5-6.
61. House, Jonathan C., Toward Combined Arms Warfare, (Ft. Leavenworth, 1984), p. 122.
62. Ibid., p. 122.

63. Reznichenko, V. G., Taktika, op.cit., p. 57.

64. Dick C. J., "Soviet Battle Drills, Vulnerability or Strength?" International Defense Review, May, 1985, p.665.

65. The OPFOR regiment at Fort Irwin is actually made up of a U.S. mechanized battalion and a tank battalion. M551 Sheridan light tanks are modified to resemble either a T-72 tank or a BMP-1. There are also a few Russian MTLB personnel carriers and a handful of M113s modified to look like BMPs. There are insufficient infantry soldiers in the OPFOR to man the 90 BMPs and 40 tanks of the regiment and fight dismounted. Infantry units, including Marines, are sent temporarily to Fort Irwin to provide the dismounted troops for the OPFOR. Their numbers range from 150-250 personnel. This falls well short of the 700 personnel a Soviet motorized rifle regiment dismounts, but is fairly close to what a tank regiment might dismount.

#### BIBLIOGRAPHY

United States Army (All American doctrinal material printed by Government Printing Office, Washington, DC unless otherwise noted)

FM 71-2, The Tank and Mechanized Infantry Battalion Task Force (approved final draft), January 1988.

FC 71-3, The Armor and Mechanized Infantry Brigade (Ft. Leavenworth, KS, GPO), October 1985.

FC 71-100, Armored and Mechanized Division and Brigade Operations (Ft. Leavenworth, KS GPO), 7 June 1984.

FM 100-2-3, The Soviet Army: Troops, Organization and Equipment, 16 July 1984.

FM 100-2-2, The Soviet Army: Specialized Warfare and Rear Area Support, 16 July 1984.

FM 100-2-1, The Soviet Army: Operations and Tactics, 16 July 1984.

FM 100-5, Operations, 1976.

Fm 100-5, Operations, 5 May 1986.

FC 100-15, Corps Operations, (Coordinating Draft), January 1988.

FM 101-5-1, Operational Terms and Symbols, 21 October 1985.

FC 101-5-2, Staff Officers Handbook, January 1987.

Student Text 100-9, The Command Estimate, (Ft. Leavenworth, Ks., GPO, July 1987).

Defense 88 Almanac, September/October 1988.

Defense Intelligence Agency, Handbook of Soviet Armed Forces Military Symbols, DDB-2680-41-78, August 1978.

Defense Intelligence Agency, Soviet Front Fire Support, DDB-1130-8-82, September 1982.

Soviet Military Power 1987, March 1987.

Soviet Military Power 1988, An Assessment of the Threat, April 1988.

Romjue, John L., From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982, (United States Army Training and Doctrine Command Historical Office, Ft. Monroe, Virginia), June 1984.

Marsh, John O. Jr., Secretary of the Army, and Wickham, John A. Jr., General, U.S. Army, The United States Army Posture Statement FY88, undated.

III Corps Maneuver Pamphlet (Headquarters U.S. Army III Corps, Ft. Hood, Texas; May 1987).

#### Other

BDM Corporation, A Comparative Lexicon of U.S. Soviet Military Technical Terminology, (McLean, Virginia: BDM Corporation, 1988).

#### SOVIET

Dragunskiy, D. A., The Motorized Rifle (Tank) Battalion in Combat (Moscow, 7 April 1986) JPRS, UMA-88, 24 Mar 1986.

Reznichenko, V. G., Tactics (Moscow: Voenizdat, 1987) JPRS Report 3 JPRS VMA 88-008-L-I, 88-088-L-II published June 1988 (FOUO).

Reznichenko, V. G., Tactics (Moscow: Voennoye Izdatel'stvo, 1984.) Translated by CIS multilingual section, National Defense Headquarters, Ottawa, Canada. Revised and issued by Air Force Intelligence Service, May 1985 (FOUO).

Sverdlow, F. D. Col., Forward Detachments in Combat (Moscow, 24 Dec 1985) JPRS, UMA-87-014-L, 17 Sep 1985

### BRITISH ARMY

The Army Field Manual, Volume II Part 2, Soviet Operations, (Delco Printing Co., London.), April 1986 (Restricted).

### BOOKS

Bellamy, Chris; The Future of Land Warfare, (New York, St. Martin's Press, 1987).

English, John A., On Infantry, (New York, Praeger Publishers, 1984).

Gabriel, Richard A., Operation Peace for Galilee (New York: Hill and Wang, 1984).

Glantz, David M., August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945, Leavenworth Papers No. 8, (Ft. Leavenworth, Ks., GPO, June, 1983)

Griffith, Paddy, Forward into Battle (Sussex: Antony Bird Publications LTD, 1981).

Herzog, Chaim, The Arab-Israeli Wars (New York: Vintage Books 1982).

Holmes, Richard, Acts of War (New York: The Free Press, 1985).

House, Jonathan M. Cpt., Toward Combined Arms Warfare: A Survey of 20th Century Tactics, Doctrine, and Organization (Ft. Leavenworth, KS, Combat Studies Institute, August 1984).

Kahalani, Avigdor, The Heights of Courage (Westport, Connecticut, Greenwood Press, 1984).

Keegan, John, The Face of Battle (New York: Penguin Books, 1976).

Kennedy, Paul, The Rise and Fall of the Great Powers (New York, NY: Random House, 1987)

MacDonald, Charles B., A Time For Trumpets, (New York, 1985).

Posen, Barry F., The Sources of Military Doctrine (Ithaca, NY: Cornell University Press, 1984).



Semmel, Bernard; editor, Marxism and the Science of War (Oxford: Oxford University, 1981).

Simpkin, Richard E., Race to the Swift (London: Brassey's Defence, 1985).

Simpkin, Richard E., Red Armour (London: Brassey's Defence Publishers, 1984).

Simpkin, Richard E., Human Factors in Mechanized Warfare (Oxford: Brassey's, 1983).

Vigor, P. H., Soviet Blitzkrieg Theory (New York: St. Martin's Press, 1983).

Ziemke, Earl F., Stalingrad to Berlin, the German Defeat in the East (Washington, D.C.: Office of the Chief of Military History, 1968).

#### ARTICLES

Bates, Jared L. Col. and Quinn, Jamie B. LTC, "T2 S=V" Military Review, March 1986, p. 21.

Burgess, William, "Soviets Size Up Airland Battle", Army, July 1986, p. 38.

Davydov S. and Chervondad V., "Conventional, But No Less Dangerous", Soviet Press Selected Translations, June 1988, p. 93.

Dick, C. J., "Soviet Battle Drills - Vulnerability or Strength", International Defense Review, May 1986, p. 603.

Donnelly, C. N., "The Development of Soviet Military Doctrine", Soviet Military Readings, (Ft. Leavenworth, Kansas, 1988), p. 1.

Donnelly, C. N., "Soviet Tactics for Fighting in Built-up Areas", International Defense Review, July 1985, p. 1061.

Donnelly, C.N., "The Soviet Operational Maneuver Group: A New Challenge for NATO", Soviet Military Readings, (Ft. Leavenworth, 1988), p.9 thru 26.

Dzhelaukhov, Kh., "The Infliction of Deep Strikes", Soviet Operational Concepts, U.S. Army College, Art of War Colloquium, (Carlisle Barracks, Pa., November 1983), p.123.

Glantz, David M., "Force Structure in Light of Contemporary Requirements" (Unpublished -Ft. Leavenworth, KS, SASO, 1988).

Glantz, David M., "Soviet Operational Formation for Battle: A Perspectus", Military Review, February, 1983; P. 2-12. SASO Reprint.

Glantz, David M., "Soviet Offensive Ground Doctrine Since 1945", Air University Review, 1983, p. 25-35. SASO Reprint.

Glantz, David M., "The Soviet Conduct of War" (Ft. Leavenworth, KS. SASO, 30 Mar 1987).

Hines, John G., "Soviet Front Operations in Europe-Planning for Encirclement", (Ft Leavenworth, Ks, SAMS, 1988)

Holcomb, James F., "Recent Developments in Soviet Helicopter Tactics", (Soviet Studies Research Centre, Royal Military Academy, Sandhurst, England. March 1988)

Holder, L. D., "Catching Up With Operational Art", AMSP Course 3, The Contemporary Practice of Operational Art, (Ft. Leavenworth, Ks., 1988), p. 4.

Kipp, Jacob W., "Conventional Force Modernization and the Asymmetries of Military Doctrine", (Ft. Leavenworth, KS. SASO, undated).

Koziej, Stanislaw, "Anticipated Directions for Change in Tactics of Ground Troops", Soviet Army Studies Office, Soviet Future War, (Ft. Leavenworth, Ks., 27 April 1987)

Krupchenko, I., "The Organization and Execution of Marches by Tank and Mechanized Formations During tthe Years of The Great Patriotic War", Readings in Soviet Operational Art, (Ft. Leavenworth, Ks., 1987. Originally published in the Soviet press in 1984), p. 421

Ludvigsen, Eric C., "The Mechanized Forces in the Next Century", Army, July 1987, p. 22.

Menning, Bruce W., "Marshal Akhromeev's Post INF World", (Ft. Leavenworth, Ks, SASO, 27 January 1988)

Odintsov, V., and Ovsyannikov, V., "Rear Support for Mobile Groups", Readings in Soviet Operational Art, (Ft. Leavenworth, Ks., 1987. Originally published in the Soviet press in 1983), p. 441.

Orenstein, Harold S., Selected Translations from the Polish Military Press: Volume II. Artillery; Tanks; Helicopters; Night Operations; Psychological Factors (Ft. Leavenworth, KS: SASO, 3 Sep 1987).

Orenstein, Harold S., Selected Translations from the Polish Military Press, Volume I, Tactics; Command and Control and Communications; Logistics. (FT. Leavenworth, KS, SAGO, 1987).

Saint, Crosbie E., and Yates, Walter H., "Attack Helicopter Operations in the AirLand Battle: Close Operations", Military Review, June 1988, p. 2 thru 15.

Simchenkov, P. M. Col., "Experience of Organizing, Conducting Reconnaissance in Force", USSR Report, JPRS #9, Sep 1985, p.

Smith, D.L. and Meier A. L., "Ogarkov's Revolution - Soviet Military Doctrine for the 1990's", International Defense Review, July 1987, p. 869.

Sullivan, Bloomer D., "The Future European Battlefield", Military Review, July 1988, p. 50.

"Speech of Marshal Rotmistrov at 1946 Conference on Berlin Operation", Reprinted in USSR Report - JPRS VMA 86-009, Sep 85, p. 25.

Vorobeyev, I., "Foward Detachments in Offensive Battles and Operations", Soviet Operational Concepts, U.S. Army College, Art of War Colloquium, (Carlisle Barracks, Pa., November 1983), p. 118.

Wass de Czege, Huba Col., "Understanding and Developing Combat Power", SAMS Course 2 Reading, AY 88-89 (Ft. Leavenworth, KS, GPO, p. 1).

White, Thomas E. Jr., "Disrupting the Tempo of Soviet Operations", Military Review, November 1987, p. 2.